```
=> fil hcap
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FILE COVERS 1907 - 23 Aug 2007  VOL 147 ISS 9
FILE LAST UPDATED: 22 Aug 2007  (20070822/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

=> d que l80
L1          3608 SEA FILE=REGISTRY ABB=ON  PLU=ON  NC4-C6/ES AND C6/ES AND N=2
                 AND NR=3 AND C=23
L15           12 SEA FILE=REGISTRY ABB=ON  PLU=ON  C23H27N2.ClO4/MF
L16            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  L15 AND L1
L18           13 SEA FILE=REGISTRY ABB=ON  PLU=ON  C21H23N2S.ClO4/MF
L19            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  L18 AND NRS=2 AND NR=3 AND
                 NCSC2-C6/ES AND C6/ES
L20            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  C31H43N4S2.3BR/MF
L21            2 SEA FILE=REGISTRY ABB=ON  PLU=ON  C53H62N6S2.4I/MF
L25            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  L21 NOT 177597-81-8
L26            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  C26H31N3S.2I/MF
L32            2 SEA FILE=REGISTRY ABB=ON  PLU=ON  C27H32N4O6S2.2C6H15N/MF
L33            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  C35H27BF6N3O7S2.NA/MF
L34            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  C35H28BF6N4O7S.NA/MF
L38              STR
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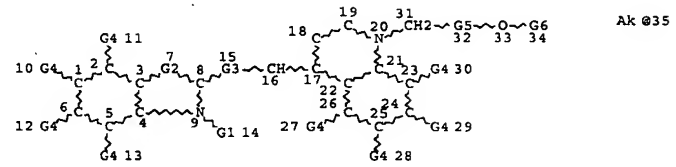


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VAR G1=H/35
VAR G2=S/O/36
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REP G3=(1-2) 38-8 39-16
VAR G4=H/35/40
VAR G5=CH2/42
VAR G6=H/45/35
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS SAT  AT  35
GGCAT   IS SAT  AT  37
GGCAT   IS SAT  AT  41
GGCAT   IS SAT  AT  46
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS X3 C  AT  35
ECOUNT  IS X3 C  AT  37
ECOUNT  IS X3 C  AT  41

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  46

STEREO ATTRIBUTES: NONE
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L41           10 SEA FILE=REGISTRY ABB=ON  PLU=ON  L40 AND NC=2
L42              STR
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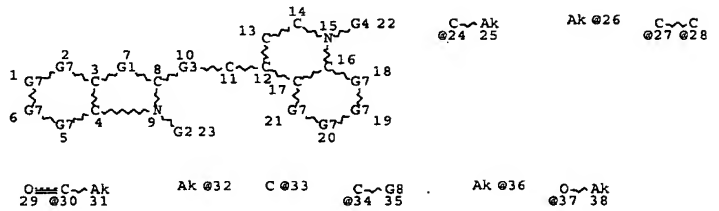


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VAR G1=S/O/24
VAR G2=H/26
REP G3=(0-2) 27-8 28-11
VAR G4=H/30/32
VAR G7=33/34
VAR G8=36/37
NODE ATTRIBUTES:
CONNECT IS E2  RC AT  11
CONNECT IS E2  RC AT  13
CONNECT IS E2  RC AT  14
CONNECT IS E3  RC AT  24
CONNECT IS E1  RC AT  25
CONNECT IS E1  RC AT  26
CONNECT IS E2  RC AT  27
CONNECT IS E2  RC AT  28
CONNECT IS E1  RC AT  31
CONNECT IS E1  RC AT  32
CONNECT IS E2  RC AT  33
CONNECT IS E3  RC AT  34
CONNECT IS E1  RC AT  36
CONNECT IS E1  RC AT  38
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DEFAULT MLEVEL IS ATOM
GGCAT   IS LOC  AT  26
GGCAT   IS LOC  AT  36
GGCAT   IS LOC  AT  38
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  38

STEREO ATTRIBUTES: NONE
L44          95 SEA FILE=REGISTRY SSS FUL L42
L45          48 SEA FILE=REGISTRY ABB=ON  PLU=ON  L44 AND NC=2
L46          67 SEA FILE=REGISTRY ABB=ON  PLU=ON  L16 OR L19 OR L20 OR L25 OR
                L26 OR L32 OR L33 OR L34 OR L41 OR L45
L47         526 SEA FILE=CAPLUS ABB=ON  PLU=ON  L46
L52       46411 SEA FILE=HCAPLUS ABB=ON  PLU=ON  URINE ANALYSIS+PFT,NT/CT
L54       14072 SEA FILE=HCAPLUS ABB=ON  PLU=ON  STAINING, BIOLOGICAL+PFT/CT
L55        1842 SEA FILE=HCAPLUS ABB=ON  PLU=ON  STAINS, BIOLOGICAL+PFT/CT
L56          58 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L47 AND (L54 OR L55)
L57         192 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L46(L)ANST+NT/RL
L58         122 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L46(L)BIOL+NT/RL
L59          50 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L57 AND L58
L60          11 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L56 AND L59
L61          11 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L47 AND L52
L62          11 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L47 AND URIN?
L64          11 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L61 OR L62
L65           6 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L64 AND L57
L66           5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L64 AND L58
L67          22 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L65 OR L66 OR L60
L68          29 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L57 OR L58) AND ?BACTER?
L69          46 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L67 OR L68
L71          29 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L69 AND ?STAIN?
L73          46 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L69 OR L71
L74        4829 SEA FILE=HCAPLUS ABB=ON  PLU=ON  SAKAI Y?/AU
L75        2302 SEA FILE=HCAPLUS ABB=ON  PLU=ON  KAWASHIMA Y?/AU
L76         989 SEA FILE=HCAPLUS ABB=ON  PLU=ON  INOUE J?/AU
L77         293 SEA FILE=HCAPLUS ABB=ON  PLU=ON  IKEUCHI Y?/AU
L78           7 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L74 OR L75 OR L76 OR L77)
                AND ?BACTER? AND ?STAIN?
L79           2 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L73 AND L78
L80          46 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L73 OR L79

=> d l80 ibib abs hitind hitstr tot

L80  ANSWER 1 OF 46  HCAPLUS  COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:        2007:65371  HCAPLUS  Full-text
DOCUMENT NUMBER:         146:245116
TITLE:                   Towards a portable microchip system with integrated
                         thermal control and polymer waveguides for real-time
                         PCR
AUTHOR(S):               Wang, Zhenyu; Sekulovic, Andrea; Kutter, Jorg P.;
                         Bang, Dang D.; Wolff, Anders
CORPORATE SOURCE:        MIC - Department of Micro and Nanotechnology,
                         Technical University of Denmark, Lyngby, Den.
SOURCE:                  Electrophoresis (2006), 27(24), 5051-5058
                         CODEN: ELCTDN; ISSN: 0173-0835
PUBLISHER:               Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE:           Journal
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LANGUAGE:                English
AB    A novel real-time PCR microchip platform with integrated thermal system and
      polymer waveguides has been developed. The integrated polymer optical system
      for real-time monitoring of PCR was fabricated in the same SU-8 layer as the
      PCR chamber, without addnl. masking steps. Two suitable DNA binding dyes,
      SYTOX Orange and TO-PRO-3, were selected and tested for the real-time PCR
      processes. As a model, cadF gene of Campylobacter jejuni has been amplified
      on the microchip. Using the integrated optical system of the real-time PCR
      microchip, the measured cycle threshold values of the real-time PCR performed
      with a dilution series of C. jejuni DNA template (2 to 200 pg/μL) could be
      quant. detected and compared with a conventional post-PCR anal. (DNA gel
      electrophoresis). The presented approach provided reliable real-time quant.
      information of the PCR amplification of the targeted gene. With the
      integrated optical system, the reaction dynamics at any location inside the
      micro reaction chamber can easily be monitored.
CC    3-1 (Biochemical Genetics)
      Section cross-reference(s): 9, 10
ST    microchip real time PCR polymer waveguide Campylobacter
      detection
IT    Biochips
        Campylobacter jejuni
      Lab-on-a-chip
      Optical waveguides
      Temperature effects, biological
         (towards a portable microchip system with integrated thermal control
         and polymer waveguides for real-time PCR)
IT    157199-63-8, To-PRO-3   324767-53-5, SYTOX Orange
      RL: ARG (Analytical reagent use); BUU (Biological use,
      unclassified); ANST (Analytical study); BIOL
      (Biological study); USES (Uses)
         (DNA-binding dye; towards a portable microchip system with integrated
         thermal control and polymer waveguides for real-time PCR)
IT    157199-63-8, To-PRO-3
      RL: ARG (Analytical reagent use); BUU (Biological use,
      unclassified); ANST (Analytical study); BIOL
      (Biological study); USES (Uses)
         (DNA-binding dye; towards a portable microchip system with integrated
         thermal control and polymer waveguides for real-time PCR)
RN    157199-63-8  HCAPLUS
CN    Quinolinium, 4-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propen-1-yl]-1-[3-
      (trimethylammonio)propyl]-, iodide (1:2)  (CA INDEX NAME)
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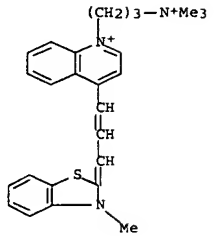


●2 I-

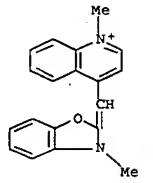
REFERENCE COUNT: 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 2 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:53333 HCAPLUS Full-text
DOCUMENT NUMBER: 146:333375
TITLE: Binding of Intercalating and Groove-Binding Cyanine Dyes to Bacteriophage T5
AUTHOR(S): Eriksson, Maja; Haerdelin, Maria; Larsson, Anette; Bergenholtz, Johan; Aakerman, Bjoern
CORPORATE SOURCE: Department of Chemical and Biological Engineering, Chalmers University of Technology, Goeteborg, S412 96, Swed.
SOURCE: Journal of Physical Chemistry B (2007), 111(5), 1139-1148
CODEN: JPCBFK; ISSN: 1520-6106
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The interaction between four related cyanine dyes and bacteriophage T5 is investigated with fluorescence and absorption spectroscopy. The dyes, which differ in size, charge, and mode of DNA-binding, penetrate the capsid and bind the DNA inside. The rate of association decreases progressively with increasing dye size, from a few minutes for YO to more than 50 h for YOYO (at 37°). The relative affinity for the phage DNA is a factor of about 0.2 lower than for the same T5-DNA when free in solution Comparison of groove-bound BOXTO-PRO and intercalating YO-PRO shows that the reduced affinity is not due to DNA extension but perhaps influenced by competition with other cationic DNA-binding agents inside the capsid. Although, the extent of dye binding to the phages decreases with increasing external ionic strength, the affinity relative to free DNA increases, which indicates a comparatively weak screening of electrostatic interactions inside the phage. The rate of binding increases with increasing ionic strength, reflecting an increase in effective pore size of the capsid as electrostatic interactions are screened and/or a faster diffusion of the dye through the DNA matrix inside the capsid as the DNA affinity is reduced. A combination of electron microscopy, light scattering, and linear dichroism show that the phages are intact after YO-PRO binding, whereas a small degree of capsid rupture cannot be excluded with BOXTO-PRO.

CC 9-5 (Biochemical Methods)
Section cross-reference(s): 10
ST intercalating groove binding cyanine dye bacteriophage T5 assocn
IT Molecular recognition
(DNA; binding of intercalating and groove-binding cyanine dyes to bacteriophage T5)
IT Affinity
Cyanine dyes
Diffusion
Electric screening
Electrostatic force
Enterobacteria phage T5
Fluorescence
Fluorescent indicators
Fluorometry
Intercalating agents
Intercalation
Ionic strength
Pore size

UV and visible spectroscopy
(binding of intercalating and groove-binding cyanine dyes to bacteriophage T5)
IT DNA
RL: BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(binding of intercalating and groove-binding cyanine dyes to bacteriophage T5)
IT Permeability
(capsid wall; binding of intercalating and groove-binding cyanine dyes to bacteriophage T5)
IT Virion structure
(capsid; binding of intercalating and groove-binding cyanine dyes to bacteriophage T5)
IT Molecular association
(dye-DNA; binding of intercalating and groove-binding cyanine dyes to bacteriophage T5)
IT 143413-85-8 143413-86-9 152068-09-2 923582-33-6, BOXTO-PRO
RL: BUU (Biological use, unclassified); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process); USES (Uses)
(binding of intercalating and groove-binding cyanine dyes to bacteriophage T5)
IT 143413-86-9
RL: BUU (Biological use, unclassified); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process); USES (Uses)
(binding of intercalating and groove-binding cyanine dyes to bacteriophage T5)
RN 143413-86-9 HCAPLUS
CN Quinolinium, 1-methyl-4-[(3-methyl-2(3H)-benzoxazolylidene)methyl]-, iodide (1:1) (CA INDEX NAME)



●I⁻

REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 3 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:2236 HCAPLUS Full-text
DOCUMENT NUMBER: 146:138286
TITLE: Reference object for detecting malfunction of particle analyzer
INVENTOR(S): Kawate, Yasunori

PATENT ASSIGNEE(S): Sysmex Corporation, Japan
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 36pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1880942	A	20061220	CN 2006-10098740	20060712
EP 1744145	A2	20070117	EP 2006-447087	20060706
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, YU				
JP 2007047154	A	20070222	JP 2006-189883	20060710

PRIORITY APPLN. INFO.: JP 2005-203279 A 20050712

AB The title particle analyzer treats the target particles in the biosample by fluorescent staining with a certain dye, and then analyzes the stained target particles. The title reference object comprises a first standard particle treated by fluorescent staining, and a second standard particle containing fluorescent dye that can exhibit a certain fluorescence intensity. This invention also provides the method and device that uses the reference object to detect the abnormal parts of the particle analyzer.

CC 9-16 (Biochemical Methods)
Section cross-reference(s): 10, 13

ST fluorescence dye emulsion ref particle fluorometry microorganism blood urine

IT Staining, biological
(fluorescent; reference object for detecting malfunction of particle analyzer)

IT Blood analysis
Cylinders
Epithelium
Erythrocyte
Eubacteria
Fluorescent dyes
Fluorometry
Leukocyte
Light sources
Microorganism
Particles
Sensors
Staining, biological
Urine analysis
(reference object for detecting malfunction of particle analyzer)

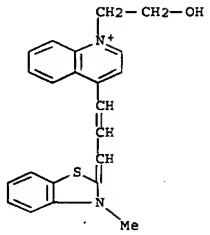
IT 514-73-8, NK-136 36536-22-8, NK-529 189148-50-3
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(reference object for detecting malfunction of particle analyzer)

IT 189148-50-3
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(reference object for detecting malfunction of particle analyzer)

RN 189148-50-3 HCAPLUS
CN Quinolinium, 1-(2-hydroxyethyl)-4-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propenyl]-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

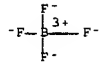
CM 1

CRN 189148-49-0
CMF C22 H21 N2 O S



CM 2

CRN 14874-70-5
CMF B F4
CCI CCS



L80 ANSWER 4 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:1207557 HCAPLUS Full-text
DOCUMENT NUMBER: 145:495830
TITLE: Disinfection of biological fluids using asymmetric cyanine dyes
INVENTOR(S): Wagner, Stephen J.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 14pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2006257844	A1	20061116	US 2006-430848	20060510

PRIORITY APPLN. INFO.: US 2005-680502P P 20050513
OTHER SOURCE(S): MARPAT 145:495830

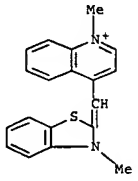
AB Asym. cyanine dyes that bind nucleic acid but not red blood cell membrane, and function as photosensitizers when rigidly bound but not when free in solution are provided. Unbound dye thus causes minimal oxidative damage. The dyes do

not substantially accumulate in red blood cells, thereby minimizing hemolysis due to oxidative damage. Biol. fluids, such as blood and blood products can be disinfected by mixing the fluid with these asym. cyanine dye that binds to nucleic acid, irradiating the mixture, recovering clin. significant components from the biol. fluid and/or assaying the fluid for pathogens. Thus, various viruses and bacteria were photoinactivated in a red blood cell preparation using Thiazole Orange. For example, Thiazole Orange phototreatment using 80 μM dye and 7.4 J/cm2 of cool white light inactivated 5.1 to 7.4 log10 of tested envelope viruses. In addition, > 6.3 log10 of intracellular HIV was photoinactivated .

INCL 435002000; 435032000; 435031000
CC 63-8 (Pharmaceuticals)
IT Animal virus
Blood
Blood cell
Blood products
Cyanine dyes
Disinfectants
Erythrocyte
Eubacteria
Human
Human immunodeficiency virus 1
Light
Photosensitizers, pharmaceutical
Sterilization and Disinfection
(disinfection of biol. fluids using asym. cyanine dyes followed by irradiation)
IT 107091-89-4, Thiazole Orange
RL: THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(disinfection of biol. fluids using asym. cyanine dyes followed by irradiation)
IT 107091-89-4, Thiazole Orange
RL: THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(disinfection of biol. fluids using asym. cyanine dyes followed by irradiation)
RN 107091-89-4 HCAPLUS
CN Quinolinium, 1-methyl-4-[(3-methyl-2(3H)-benzothiazolylidene)methyl]-, 4-methylbenzenesulfonate (1:1) (CA INDEX NAME)

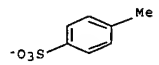
CM 1

CRN 24144-08-9
CMF C19 H17 N2 S



CM 2

CRN 16722-51-3
CMF C7 H7 O3 S



L80 ANSWER 5 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:1123770 HCAPLUS Full-text
DOCUMENT NUMBER: 145:451262
TITLE: Multiplex microparticle system for microarrays including fluorescence dye-bound polymer beads
INVENTOR(S): Mehrpouyan, Majid; Recktenwald, Diether J.; Varro, Rudolf
PATENT ASSIGNEE(S): Becton, Dickinson and Company, USA
SOURCE: U.S. Pat. Appl. Publ., 12pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2006240411	A1	20061026	US 2006-404348	20060414
WO 2006115870	A2	20061102	WO 2006-US14361	20060414
WO 2006115870	A3	20070719		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA

PRIORITY APPLN. INFO.: US 2005-673471P P 20050420
AB Arrays of microparticle populations, each population labeled with a single fluorescent dye, are provided for use in multiplex assays. The populations form a virtual multidimensional array wherein each microparticle is identified by fluorescence intensity in two different fluorescence detection channels. The arrays are useful in a variety of assays, including multiplex, multi-analyte assays for the simultaneous detection of two or more analytes by, for example, flow cytometry, and a labeling reagents in, for example, microscopy. The use of singly-dyed microparticles to form multidimensional arrays greatly simplifies the creation of multiplex assays.
INCL 435005000; 435006000; 435007310; 435007320; 436518000
CC 9-1 (Biochemical Methods)

Section cross-reference(s): 3, 4

IT Algae
Animal tissue
Cell
Environmental analysis
Eubacteria
Fluorescence microscopy
Fluorescent dyes
Fluorometry
Fungi
Microarray technology
Microorganism
Microparticles
Parasite
Pathogen
Virus
(multiplex microparticle system for microarrays including fluorescence dye-bound polymer beads)

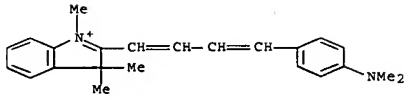
IT 24796-94-9, Oxazine 725 76433-27-7, LDS 730 76433-29-9, LDS 751 89872-07-1, LDS 750 154530-43-5, LDS 765 913169-98-9, ABS 643
RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)
(multiplex microparticle system for microarrays including fluorescence dye-bound polymer beads)

IT 76433-27-7, LDS 730 76433-29-9, LDS 751
RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)
(multiplex microparticle system for microarrays including fluorescence dye-bound polymer beads)

RN 76433-27-7 HCAPLUS
CN 3H-Indolium, 2-[4-[4-(dimethylamino)phenyl]-1,3-butadienyl]-1,3,3-trimethyl-, perchlorate (9CI) (CA INDEX NAME)

CM 1

CRN 76433-26-6
CMF C23 H27 N2



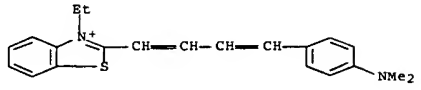
CM 2

CRN 14797-73-0
CMF Cl O4

RN 76433-29-9 HCAPLUS
CN Benzothiazolium, 2-[4-[4-(dimethylamino)phenyl]-1,3-butadien-1-yl]-3-ethyl-, perchlorate (1:1) (CA INDEX NAME)

CM 1

CRN 76433-28-8
CMF C21 H23 N2 S



CM 2

CRN 14797-73-0
CMF Cl O4

L80 ANSWER 6 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:630000 HCAPLUS Full-text
DOCUMENT NUMBER: 145:79328
TITLE: A method for diagnosing and monitoring cellular reservoirs of disease
INVENTOR(S): Scott, Lesley Erica
PATENT ASSIGNEE(S): University of the Witwatersrand, Johannesburg, S. Afr.
SOURCE: PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2006067572 A2 20060629 WO 2005-IB3738 20051212
WO 2006067572 A3 20060810
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
PRIORITY APPLN. INFO.: ZA 2004-10087 A 20041214

AB The invention provides an assay for diagnosing and/or monitoring a viral infection or disease in a patient, the assay including the steps of mixing a sample of leukocytes with a fluorescent cell membrane-permeable dye which stains RNA or both DNA and RNA within the leukocytes; identifying from all the leukocytes at least two of the three major sub-populations of leukocytes selected from the group consisting of monocytes, granulocytes and lymphocytes; determining the fluorescence intensity for each of the identified sub-populations; and comparing the fluorescence intensity of at least two cell sub-populations to each other to obtain at least one of the following ratios: monocytes to granulocytes, monocytes to lymphocytes, and granulocytes to lymphocytes. The viral infection may be HIV and the disease may be AIDS. The invention also provides a method of monitoring the cellular viral, parasitic or bacterial reservoir of a patient with a viral or bacterial infection by the steps described above. A kit for performing the assay or method is also provided. Red blood cells of blood samples from HIV neg. and HIV pos. patients were lysed using Immunoprep reagent and lysed samples were treated with thiazole orange. The samples were then analyzed on an XL MCL flow cytometer and the mean fluorescent intensity in the FL1 channel for each region was measured. The monocyte, granulocyte and lymphocyte ratios were determined The ratios were different for HIV pos. patients compared with HIV neg. patients. The monocytes from HIV pos. patients had increased mean fluorescent intensity.

CC 9-5 (Biochemical Methods)
Section cross-reference(s): 10, 14, 15

ST diagnosis cellular reservoir disease; leukocyte RNA staining subpopulation fluorescence viral infection assay; kit assay disease reservoir leukocyte RNA fluorescence; HIV monocyte mean fluorescent intensity thiazole orange staining

IT Anti-AIDS agents
Antiviral agents
(HIV reservoir monitoring in relation to treatment with; assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

IT CD14 (antigen)
CD38 (antigen)
FcγRIII receptors
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(as cell activation marker for phenotyping; assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

IT Tuberculosis
(as other disease, addnl. monitoring of; assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

IT AIDS (disease)
Animal tissue culture
Blood analysis
Cell membrane
Computer program
Development, mammalian postnatal
Diagnosis
Disease, animal
Electric impedance
Flow cytometry
Fluorescence
Fluorescent dyes
Fluorometry
Human
Human immunodeficiency virus
Human immunodeficiency virus 1
Lymphocyte
Monocyte
Polymorphonuclear leukocyte
Prognosis
Test kits
(assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

IT DNA
RNA
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

IT CD4 (antigen)
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(assay further including count of; assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

IT Fluorometers
(assay using; assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

IT Infection
(bacterial; assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

IT Spheres
(beads, kit containing reagents of; assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

IT Infection
(co-infection, addnl. monitoring of; assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

IT Therapy
(determination of patient response to; assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study);

USES (Uses)
(fluorescent, for CD4 count, assay further including; assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

IT Staining, biological
(fluorescent; assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

IT Immunoassay
(for CD14/CD16 immunophenotyping; assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

IT Blood
(hematol. analyzer, assay using; assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

IT Development, mammalian postnatal
(infant; assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

IT Cytolysis
(kit containing agent for red blood cell; assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

IT Culture media
Stabilizing agents
(kit containing; assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

IT Computers
(kit including instructions readable by; assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

IT UV and visible spectroscopy
(light-scattering; assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

IT Erythrocyte
(lysis in blood sample for anal. of leukocytes; assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

IT Cell activation
(markers, for phenotyping; assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

IT Samples
(of leukocytes; assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

IT gag proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(p24gag, as cell activation marker for phenotyping; assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

IT Infection
(parasitic; assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

IT Biological transport

(permeation, of fluorescent dye through cell membrane; assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

IT Leukocyte
(sample of; assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

IT Phenotypes
(set of cell membrane markers or intracellular markers for determining; assay
for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

IT Phycoerythrins
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(thiazole orange nucleic acid binding dye in combination with CD4-binding; assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

IT Infection
(viral; assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

IT 107091-89-4, Thiazole orange
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

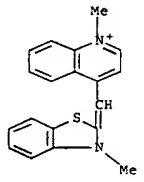
IT 107091-89-4, Thiazole orange
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(assay for diagnosing and monitoring cellular reservoirs of disease and assay kit containing fluorescent RNA-staining cell membrane-permeable dye)

RN 107091-89-4 HCAPLUS

CN Quinolinium, 1-methyl-4-[(3-methyl-2(3H)-benzothiazolylidene)methyl]-, 4-methylbenzenesulfonate (1:1) (CA INDEX NAME)

CM 1

CRN 24144-08-9
CMF C19 H17 N2 S



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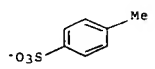
CRN 16722-51-3
CMF C7 H7 O3 S



L80 ANSWER 7 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:273965 HCAPLUS Full-text
DOCUMENT NUMBER: 144:307966
TITLE: Methods for detection of pathogens in red blood cells
INVENTOR(S): Vannier, Edouard
PATENT ASSIGNEE(S): New England Medical Center Hospitals, Inc., USA
SOURCE: PCT Int. Appl., 47 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

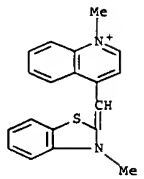
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006031544	A2	20060323	WO 2005-US31793	20050909
WO 2006031544	A3	20070322		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
US 2006063185	A1	20060323	US 2005-223599	20050909
PRIORITY APPLN. INFO.:			US 2004-608825P	P 20040909

AB The present invention relates to methods for diagnosing a parasitic microorganism that resides in red blood cells, such as Babesia microti.
CC 9-16 (Biochemical Methods)
Section cross-reference(s): 10, 14
IT Stains, biological
(Dimeric cyanine nucleic acid; methods for detection of pathogens in red blood cells)
IT Stains, biological
(fluorescent, nucleic acid; methods for detection of pathogens in red blood cells)
IT 25535-16-4, Propidium iodide 107091-89-4, Thiazole orange

143413-85-8, YOYO-1 154757-99-0, POPO-3 156312-20-8, YOYO-3
157199-63-8, TOPRO3 163795-75-3, SYBR Green I
166196-17-4, TOTO-3 169454-13-1, BOBO-1 169454-15-3, POPO-1
169454-17-5, BOBO-3 177571-06-1, PicoGreen 194100-76-0, SYTOX Green
305802-06-6, LOLO-1
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(methods for detection of pathogens in red blood cells)
IT 107091-89-4, Thiazole orange 157199-63-8, TOPRO3
166196-17-4, TOTO-3
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(methods for detection of pathogens in red blood cells)
RN 107091-89-4 HCAPLUS
CN Quinolinium, 1-methyl-4-[(3-methyl-2(3H)-benzothiazolylidene)methyl]-, 4-methylbenzenesulfonate (1:1) (CA INDEX NAME)

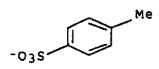
CM 1

CRN 24144-08-9
CMF C19 H17 N2 S

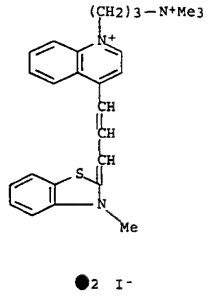


CM 2

CRN 16722-51-3
CMF C7 H7 O3 S

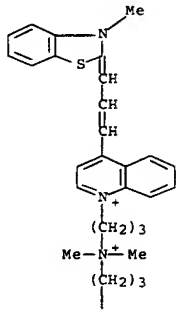


RN 157199-63-8 HCAPLUS
CN Quinolinium, 4-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propen-1-yl]-1-[3-(trimethylammonio)propyl]-, iodide (1:2) (CA INDEX NAME)



RN 166196-17-4 HCAPLUS
CN Quinolinium, 1,1'-[1,3-propanediylbis[(dimethyliminio)-3,1-propanediyl]]bis[4-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propen-1-yl]-, iodide (1:4) (CA INDEX NAME)

PAGE 1-A



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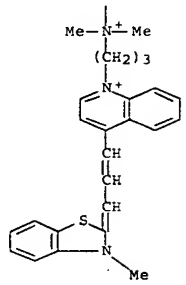


L80 ANSWER 8 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:233900 HCAPLUS Full-text
DOCUMENT NUMBER: 144:288928
TITLE: Microorganism sterilization treatment effect-measuring method using two kinds of cell growth activity information
INVENTOR(S): Oda, Yasumasa; Sakata, Takashi
PATENT ASSIGNEE(S): Sysmex Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006067974	A	20060316	JP 2004-258723	20040906
PRIORITY APPLN. INFO.:			JP 2004-258723	20040906

AB A method is provided for rapidly and accurately measuring the sterilization treatment effect on microorganism (e.g., bacillus). The method comprises elec. or optically measuring two kinds of growth activity information on the microorganism contained in a sample which has been treated for sterilization and cultured for a specified time, and calculating the microorganism number in a specified region (e.g., spore region, germination region, nutrition-type region) divided in a two-dimensional distribution diagram formed based on the two kinds of growth activity information.

CC 9-5 (Biochemical Methods)
Section cross-reference(s): 10
IT Staining, biological
(fluorescent; microorganism sterilization treatment effect-measuring method using two kinds of cell growth activity information)
IT Bacillus (bacteria, genus)
Dimension
Flow cytometry
Fluorometry
Germination
Growth, microbial
Microorganism

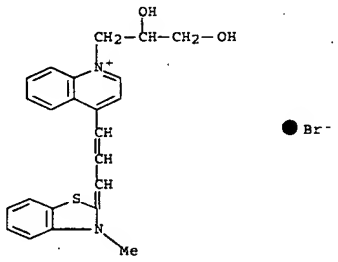
Nutrition, microbial
Spore
Sterilization and Disinfection
(microorganism sterilization treatment effect-measuring method using two kinds of cell growth activity information)

IT 189148-51-4
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(microorganism sterilization treatment effect-measuring method using two kinds of cell growth activity information)

IT 189148-51-4
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(microorganism sterilization treatment effect-measuring method using two kinds of cell growth activity information)

RN 189148-51-4 HCAPLUS

CN Quinolinium, 1-(2,3-dihydroxypropyl)-4-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propenyl]-, bromide (9CI) (CA INDEX NAME)



L80 ANSWER 9 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:180959 HCAPLUS Full-text

DOCUMENT NUMBER: 144:376148

TITLE: Thiazole orange, a DNA-binding photosensitizer with flexible structure, can inactivate pathogens in red blood cell suspensions while maintaining red cell storage properties

AUTHOR(S): Skripchenko, Andrey; Wagner, Stephen J.; Thompson-Montgomery, Dedeene; Awatefe, Helen

CORPORATE SOURCE: Holland Laboratory, Blood Components Development, American Red Cross Biomedical Services, Rockville, MD, USA

SOURCE: Transfusion (Malden, MA, United States) (2006), 46(2), 213-219
CODEN: TRANAT; ISSN: 0041-1132

PUBLISHER: Blackwell Publishing, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Development of a robust pathogen reduction system for red cells (RBCs) utilizing photosensitive dyes was constrained by hemolysis, usually mediated by reactive oxygen species emanating from dye free in solution as well as dye

bound to the RBC membrane. The RBC binding properties of thiazole orange (TO), a flexible nucleic acid intercalating cyanine dye that predominantly acts as a photosensitizer only when bound, were assessed along with its virucidal, bactericidal, and light-induced hemolytic activities. Leukodepleted 20% hematocrit RBCs suspended in Erythrosol (RAS-2) were oxygenated, inoculated with test organisms, incubated with TO, and illuminated. Control and treated samples were analyzed by appropriate assay. Identically prepared, but uncontaminated samples were phototreated, concentrated to 45% hematocrit, and assayed for potassium leakage, hemolysis, and ATP during storage. Approx. 21 percent TO bound to RBCs. Phototreatment inactivated from 5.4 to 7.1 log10 of 5 tested viruses and from 2.3 to greater than 7.0 log10 of 8 tested bacteria. Phototreated RBCs exhibited only slightly increased hemolysis, moderately elevated potassium efflux, and similar levels of ATP compared to controls. TO can photoinactivate several model viruses and pathogens in RBCs under conditions that produce limited hemolysis without the addition of quenchers or competitive inhibitors.

CC 63-3 (Pharmaceuticals)
Section cross-reference(s): 8

IT Antibacterial agents
Antiviral agents
Blood preservation
Blood products
Erythrocyte
Light
Pathogen
Photodynamic action
Photodynamic therapy
Photosensitizers, pharmaceutical
(thiazole orange photoinactivating pathogens in red blood cell suspensions while maintaining red cell storage properties)

IT 107091-89-4, Thiazole orange
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(thiazole orange photoinactivating pathogens in red blood cell suspensions while maintaining red cell storage properties)

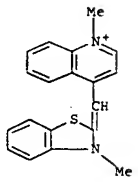
IT 107091-89-4, Thiazole orange
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(thiazole orange photoinactivating pathogens in red blood cell suspensions while maintaining red cell storage properties)

RN 107091-89-4 HCAPLUS

CN Quinolinium, 1-methyl-4-[(3-methyl-2(3H)-benzothiazolylidene)methyl]-, 4-methylbenzenesulfonate (1:1) (CA INDEX NAME)

CM 1

CRN 24144-08-9
CMF C19 H17 N2 S



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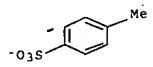
CRN 16722-51-3
CMF C7 H7 O3 S



REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 10 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:100431 HCAPLUS Full-text
DOCUMENT NUMBER: 144:187496
TITLE: Method and device for characterization of the cellular components of a biological fluid
INVENTOR(S): Lefevre, Didier
PATENT ASSIGNEE(S): Abx, Fr.
SOURCE: Fr. Demande, 34 pp.
CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2873813	A1	20060203	FR 2004-8431	20040730
FR 2873813	B1	20061117		
CA 2576753	A1	20060309	CA 2005-2576753	20050706
WO 2006024716	A1	20060309	WO 2005-FR1740	20050706

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,

CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

EP 1771718	A1	20070411	EP 2005-788740	20050706
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR				
CN 1993610	A	20070704	CN 2005-80025806	20050706
PRIORITY APPLN. INFO.:			FR 2004-8431	A 20040730
			WO 2005-FR1740	W 20050706

AB A method for differentiation and counting of the cellular components present in a sample of a biol. liquid includes a primary stage of cytol. anal. classically implemented by flow cytom. apparatus to obtain an ensemble of primary results allowing a differentiation and a counting of the whole of the cellular components of the sample as various populations; and a complementary stage of cytol. anal. of a particular type of cellular components, function of an identified cellular characteristic, to obtain complementary results allowing a differentiation and a counting of at least a population or cellular subpopulation of the sample for the identification of this cellular characteristic. The invention is useful in particular for hematol. anal.

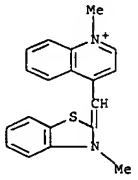
CC 9-1 (Biochemical Methods)
Section cross-reference(s): 15

IT Animal cell
Apparatus
Basophil
Blood.
Blood analysis
Body fluid
Bone marrow
Cerebrospinal fluid
Colored materials
Colorimetry
Diagnosis
Diffusion
Electric impedance
Electric resistance
Electrodes
Eosinophil
Erythrocyte
Flow cytometry
Fluorescence
Fluorescent substances
Fluorometry
Hematopoietic precursor cell
IR radiation
Lasers
Leukocyte
Lymphocyte
Monocyte
Neutrophil
Optical absorption
Optical diffraction
Optical transmission
Optics
Platelet (blood)
Pleural fluid
Synovial fluid
UV radiation
Urine analysis
(device and method for characterization of cellular components of biol. fluid)

IT 107091-89-4, Thiazole orange 140876-43-3, PC 5
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(device and method for characterization of cellular components of biol. fluid)
IT 107091-89-4, Thiazole orange
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(device and method for characterization of cellular components of biol. fluid)
RN 107091-89-4 HCAPLUS
CN Quinolinium, 1-methyl-4-[(3-methyl-2(3H)-benzothiazolylidene)methyl]-, 4-methylbenzenesulfonate (1:1) (CA INDEX NAME)

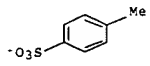
CM 1

CRN 24144-08-9
CMF C19 H17 N2 S



CM 2

CRN 16722-51-3
CMF C7 H7 O3 S



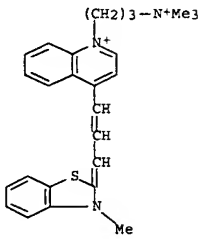
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 11 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:1234461 HCAPLUS Full-text
DOCUMENT NUMBER: 145:3492
TITLE: Implementation of accurate and fast DNA cytometry by confocal microscopy in 3D
AUTHOR(S): Ploeger, Lennert S.; Huisman, Andre; van der Gugten, Jurryt; van der Giezen, Dionne M.; Belien, Jeroen A. M.; Abbaker, Abdelhadi Y.; Dullens, Hub F. J.; Grizzle, William; Poulin, Neal M.; Meijer, Gerrit A.; van Diest, Paul J.
CORPORATE SOURCE: Department of Pathology, University Medical Center Utrecht, Utrecht, 3508 GA, Neth.
SOURCE: Cellular Oncology (2005), 27(4), 225-230
CODEN: COENCD; ISSN: 1570-5870
PUBLISHER: IOS Press
DOCUMENT TYPE: Journal
LANGUAGE: English

AB DNA cytometry is a powerful method for measuring genomic instability. Standard approaches that measure DNA content of isolated cells may induce selection bias and do not allow interpretation of genomic instability in the context of the tissue. Confocal Laser Scanning Microscopy (CLSM) provides the opportunity to perform 3D DNA content measurements on intact cells in thick histol. sections. Because the technique is tech. challenging and time consuming, only a small number of usually manually selected nuclei were analyzed in different studies, not allowing wide clin. evaluation. The aim of this study was to describe the conditions for accurate and fast 3D CLSM cytometry with a min. of user interaction to arrive at sufficient throughput for pilot clin. applications. Nuclear DNA was stained in 14 μm thick tissue sections of normal liver and adrenal stained with either YOYO-1 iodide or TO-PRO-3 iodide. Different pre-treatment strategies were evaluated: boiling in citrate buffer (pH 6.0) followed by RNase application for 1 or 18 h, or hydrolysis. The image stacks obtained with CLSM at microscope magnifications of +40 or +100 were analyzed off-line using inhouse developed software for semi-automated 3D fluorescence quantitation. To avoid sectioned nuclei, the top and bottom of the stacks were identified from ZX and YZ projections. As a measure of histogram quality, the coefficient of variation (CV) of the diploid peak was assessed. The lowest CV (10.3%) was achieved with a protocol without boiling, with 1 h RNase treatment and TO-PRO-3 iodide staining, and a final image recording at +60 or +100 magnifications. A sample size of 300 nuclei was generally achievable. By filtering the set of automatically segmented nuclei based on volume, size and shape, followed by interactive removal of the few remaining faulty objects, a single measurement was completely analyzed in approx. 3 h. The described methodol. allows to obtain a largely unbiased sample of nuclei in thick tissue sections using 3D DNA cytometry by confocal laser scanning microscopy within an acceptable time frame for pilot clin. applications, and with a CV small enough to resolve smaller near diploid stemlines. This provides a suitable method for 3D DNA ploidy assessment of selected rare cells based on morphol. characteristics and of clin. samples that are too small to prepare adequate cell suspensions.
CC 9-4 (Biochemical Methods)
IT Animal tissue
Boiling
Cell nucleus
Confocal laser scanning microscopy
Cytometry
Dimension
Human
Imaging
Solvolysis
Staining, biological
(implementation of accurate and fast DNA cytometry by confocal microscopy in 3D)
IT 143413-85-8, YOYO-1 157199-63-8, TO-PRO-3 iodide
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(implementation of accurate and fast DNA cytometry by confocal microscopy in 3D)
IT 157199-63-8, TO-PRO-3 iodide

RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(implementation of accurate and fast DNA cytometry by confocal microscopy in 3D)

RN 157199-63-8 HCAPLUS
CN Quinolinium, 4-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propen-1-yl]-1-[3-(trimethylammonio)propyl]-, iodide (1:2) (CA INDEX NAME)



●2 I-

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 12 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:962509 HCAPLUS Full-text
DOCUMENT NUMBER: 143:246739
TITLE: FATT-CTL (fluorescent-antigen-transfected target -- cytotoxic T lymphocyte) assay, nucleic acids and kits to detect antigen-specific cytolytic activity for immunity assessing and drug screening
INVENTOR(S): Gruters, Robertus Antonius; Van Baalen, Carel Adrianus; Rimmelzwaan, Guustaaf Frank; Osterhaus, Albertus Dominicus Marcellinus Erasmus
PATENT ASSIGNEE(S): Erasmus Universiteit Rotterdam, Neth.
SOURCE: PCT Int. Appl., 67 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005080991	A1	20050901	WO 2005-NL119	20050218

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

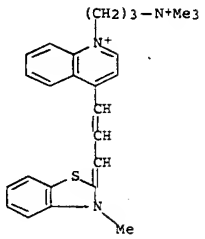
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2007087333	A1	20070419	US 2006-506418	20060818
PRIORITY APPLN. INFO.:			EP 2004-75555	A 20040220
			WO 2005-NL119	A1 20050218

AB The invention relates to a novel non-radioactive method to detect cytolytic activity against target cells expressing an specific antigen of choice. Cytotoxic T lymphocyte (CTL) activity provides a measure of the existence and magnitude of a cell-mediated cytotoxic response against a particular antigen. Specifically, the invention provides FATT (fluorescent-antigen-transfected target)-CTL assay, a kit and a nucleic acid for use in a method according to the invention. Cytotoxicity is quantified by assessing the elimination of viable cells expressing an antigen of interest associated with a fluorescent reporter mol., such as green fluorescent protein (GFP) expression assessing by flow cytometry. Thus, provided is a method for detecting cytolytic activity of cells or a substance against a population of target cells, comprising the steps of providing target cells with a first nucleic acid sequence encoding a reporter mol. and second nucleic acid sequence encoding an antigen of interest; co-culturing said target cells with a sample containing cells or a substance suspected of having cytolytic activity ; and detecting the viability of target cells provided with the reporter mol. Demonstarted is use of FATT-CTL assay with HIV-1- and influenza A virus-specific CTL and epitope variants.

IC ICM G01N033-569
ICS G01N033-50; C12N015-62; C12Q001-68
CC 15-1 (Immunochemistry)
Section cross-reference(s): 1, 3
IT Antigens
RL: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(bacterial; FATT-CTL (fluorescent-antigen-transfected target -- cytotoxic T lymphocyte) assay, and kits to detect antigen-specific cytolytic activity for immunity assessing and drug screening)
IT Nucleic acids
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(viability dye which stains; FATT-CTL (fluorescent-antigen-transfected target -- cytotoxic T lymphocyte) assay, and kits to detect antigen-specific cytolytic activity for immunity assessing and drug screening)
IT 157199-63-8, TO-PRO-3 iodide
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(FATT-CTL (fluorescent-antigen-transfected target -- cytotoxic T lymphocyte) assay, and kits to detect antigen-specific cytolytic activity for immunity assessing and drug screening)
IT 157199-63-8, TO-PRO-3 iodide
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(FATT-CTL (fluorescent-antigen-transfected target -- cytotoxic T lymphocyte) assay, and kits to detect antigen-specific cytolytic activity for immunity assessing and drug screening)

RN 157199-63-8 HCAPLUS
CN Quinolinium, 4-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propen-1-yl]-1-[3-(trimethylammonio)propyl]-, iodide (1:2) (CA INDEX NAME)



●2 I-

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 13 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:601995 HCAPLUS Full-text
DOCUMENT NUMBER: 143:280037
TITLE: A self-contained fluorescent fiber optic DNA biosensor
AUTHOR(S): Wang, Xiaofeng; Krull, Ulrich J.
CORPORATE SOURCE: Chemical Sensors Group, Department of Chemical and Physical Sciences, University of Toronto, Mississauga, ON, L5L 1C6, Can.
SOURCE: Journal of Materials Chemistry (2005), 15(27-28), 2801-2809
CODEN: JMACEP; ISSN: 0959-9428
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Single-stranded DNA (ssDNA) sequences can be used as probes to detect complementary targets, and represent useful anal. reagents for the detection and identification of bacteria, viruses and mutations. The hybridization process between probe sequences immobilized at a surface and complementary nucleic acid targets in a sample solution can, under optimal conditions, be complete in several minutes with a high degree of selectivity. Fluorescent dyes such as thiazole orange (TO) have been used extensively to quantify DNA by measuring the differential spectroscopic properties of free dye and the dye that assocs. with double-stranded DNA by intercalation. In an effort to develop a reagentless biosensor, TO has been covalently tethered by various poly(ether) strands at the 5' end of ssDNA probes, in a detection system where the oligonucleotide probes are immobilized onto the surfaces of fused silica optical fibers. Characterization of the surface immobilization has been completed using XPS. The biosensors provided changes in steady-state fluorescence intensity signals upon hybridization, that reached saturation in seconds to minutes, and were able to provide a quant. determination of hybridization at nanomolar detection limits. Aspects such as ionic strength, length of the tether that was used to attach TO to ssDNA, and the packing d. of the probe mols. were examined to determine the influence of these parameters on the thermodn. and kinetic performance of the biosensor. In a

preliminary investigation of this application, the biosensor was used to detect PCR products from Erwinia herbicola.

CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 9

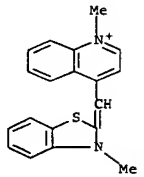
IT 107091-89-4, Thiazole orange
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(oligodeoxyribonucleotide conjugates; self-contained fluorescent fiber optic DNA biosensor)

IT 107091-89-4, Thiazole orange
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(oligodeoxyribonucleotide conjugates; self-contained fluorescent fiber optic DNA biosensor)

RN 107091-89-4 HCAPLUS
CN Quinolinium, 1-methyl-4-[(3-methyl-2(3H)-benzothiazolylidene)methyl]-, 4-methylbenzenesulfonate (1:1) (CA INDEX NAME)

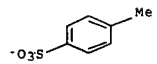
CM 1

CRN 24144-08-9
CMF C19 H17 N2 S



CM 2

CRN 16722-51-3
CMF C7 H7 O3 S



REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

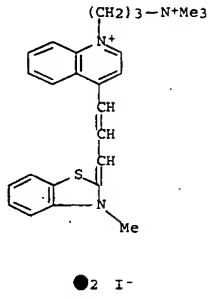
L80 ANSWER 14 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:234346 HCAPLUS Full-text
DOCUMENT NUMBER: 142:409284

TITLE: γδ T-lymphocyte cytotoxic activity against Mycobacterium bovis analyzed by flow cytometry
AUTHOR(S): Olin, Michael R.; Choi, K. Hwa; Lee, Jinhee; Molitor, Thomas W.
CORPORATE SOURCE: Clinical and Population Sciences, College of Veterinary Medicine, University of Minnesota, St. Paul, MN, 55108, USA
SOURCE: Journal of Immunological Methods (2005), 297(1-2), 1-11
CODEN: JIMMBG; ISSN: 0022-1759
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB γδ T lymphocytes contain the unique capability of responding to pathogens in both an innate and acquired immune response. Previously, γδ lymphocytes have been reported to respond to Mycobacteria tuberculosis determined by proliferation and IFN-γ production Unlike αβ lymphocytes, γδ lymphocytes constitutively express a natural killer receptor providing γδ lymphocytes the capability for innate cytolytic functions. A new cytolytic assay by flow cytometry was reported capable of determining natural killer activity using K562 cells as targets without the need for radioactive materials. The objectives of this study were to first apply the flow cytometer-based assay to assess γδ lymphocytes natural killer activity following animal vaccination with Mycobacterium bovis Bacillus Calmette-Guerin (BCG). Secondly, to optimize the flow cytometer assay to detect antigen specific cytolytic activity to mycobacterium and to compare the cytolytic activity of γδ lymphocytes to CD8 lymphocytes. γδ lymphocytes increased in NK activity following animal vaccination with M. bovis BCG. Both innate and acquired antigen-specific cytolytic activity increased following incubation with M. bovis-infected monocytes. In conclusion, flow cytometric-based assay is a sensitive and reliable tool to determine cytolytic activity of γδ T-lymphocytes against mycobacterium.

CC 15-1 (Immunochemistry)
ST T lymphocyte cytotoxicity Mycobacterium fluorescent dye flow cytometry
IT Infection
(bacterial; flow cytometric anal. of γδ T-lymphocyte cytotoxic activity against Mycobacterium bovis)
IT T cell (lymphocyte)
(cytotoxic, TCR γδ+; flow cytometric anal. of γδ T-lymphocyte cytotoxic activity against Mycobacterium bovis)
IT Monocyte
(disease, infection; flow cytometric anal. of γδ T-lymphocyte cytotoxic activity against Mycobacterium bovis)
IT Human
Immunofluorescence flow cytometry
Mycobacterium BCG
(flow cytometric anal. of γδ T-lymphocyte cytotoxic activity against Mycobacterium bovis)
IT Infection
(monocyte; flow cytometric anal. of γδ T-lymphocyte cytotoxic activity against Mycobacterium bovis)
IT 154214-55-8, PKH-26 157199-63-8, TO-PRO-3
RL: ANT (Analyte); ANST (Analytical study)
(flow cytometric anal. of γδ T-lymphocyte cytotoxic activity against Mycobacterium bovis)

IT 157199-63-8, TO-PRO-3
RL: ANT (Analyte); ANST (Analytical study)
(flow cytometric anal. of γδ T-lymphocyte cytotoxic activity against Mycobacterium bovis)
RN 157199-63-8 HCAPLUS
CN Quinolinium, 4-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propen-1-yl]-1-[3-(trimethylammonio)propyl]-, iodide (1:2) (CA INDEX NAME)



REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 15 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:780237 HCAPLUS Full-text
DOCUMENT NUMBER: 141:291842
TITLE: Dye compositions which provide enhanced differential fluorescence and light scatter characteristics
INVENTOR(S): Maples, John A.; Lopez, Lidice L.; Torke, Nancy
PATENT ASSIGNEE(S): Coulter International Corp., USA
SOURCE: U.S. Pat. Appl. Publ., 25 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004185447	A1	20040923	US 2003-392518	20030320
US 6955872	B2	20051018		
WO 2004085989	A2	20041007	WO 2004-US6889	20040305
WO 2004085989	A3	20041104		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,

ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1604039 A2 20051214 EP 2004-718051 20040305
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK
JP 2006520612 T 20060914 JP 2006-509203 20040305
PRIORITY APPLN. INFO.: US 2003-392518 A 20030320
WO 2004-US6889 W 20040305

AB A composition for enhancing differential staining of RNA, DNA and granules in a sample comprising cells contains a first fluorescent dye that can bind specific binding sites and non-specific binding sites in the sample. This first dye emits fluorescence at a first wavelength. The composition contains at least an addnl. component, which is a second non-intercalating dye in the composition that competes with said first dye for binding to the nonspecific binding sites, or a permeabilizing agent to enhance permeabilization of the dyes into the cells, or both. Reticulocytes were enumerated in blood samples by flow cytometry using a composition containing Acridine Orange as the primary dye, Hoechst 33258, and maltoside as sphering agent. The molar ratio of the second dye and the first dye is at least about 20:1.

IC ICM C12Q001-68
ICS C07H021-04
INCL 435006000; 536025320
CC 9-4 (Biochemical Methods)
ST dye enhanced differential fluorescence light scatter; RNA enhanced differential staining cell fluorescent dye; DNA enhanced differential staining cell fluorescent dye; granule enhanced differential staining cell fluorescent dye; reticulocyte flow cytometry Acridine Orange maltoside Hoechst 33258

IT Cyanine dyes
(BOBO; dye compns. which provide enhanced differential fluorescence and light scatter characteristics in staining RNA, DNA, and granules of cells)

IT Dyes
(SYTO; dye compns. which provide enhanced differential fluorescence and light scatter characteristics in staining RNA, DNA, and granules of cells)

IT Cyanine dyes
(TOTO; dye compns. which provide enhanced differential fluorescence and light scatter characteristics in staining RNA, DNA, and granules of cells)

IT Cyanine dyes
(YOYO; dye compns. which provide enhanced differential fluorescence and light scatter characteristics in staining RNA, DNA, and granules of cells)

IT Fluorescence
(autofluorescence; dye compns. which provide enhanced differential fluorescence and light scatter characteristics in staining RNA, DNA, and granules of cells)

IT Basophil
Blood analysis
Cell
Eosinophil
Erythrocyte
Flow cytometry
Fluorescent dyes
Human
Leukocyte
Lymphocyte
Mast cell

Monocyte
Neutrophil
Reticulocyte
Samples
Test kits
(dye compns. which provide enhanced differential fluorescence and light scatter characteristics in staining RNA, DNA, and granules of cells)

IT DNA
RNA
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); BIOL (Biological study); USES (Uses)
(dye compns. which provide enhanced differential fluorescence and light scatter characteristics in staining RNA, DNA, and granules of cells)

IT Staining, biological
Stains, biological
(fluorescent; dye compns. which provide enhanced differential fluorescence and light scatter characteristics in staining RNA, DNA, and granules of cells)

IT Organelle
(granule; dye compns. which provide enhanced differential fluorescence and light scatter characteristics in staining RNA, DNA, and granules of cells)

IT Solvents
(in dye composition; dye compns. which provide enhanced differential fluorescence and light scatter characteristics in staining RNA, DNA, and granules of cells)

IT Diagnosis
(kit for; dye compns. which provide enhanced differential fluorescence and light scatter characteristics in staining RNA, DNA, and granules of cells)

IT Animal cell
(mammalian, blast; dye compns. which provide enhanced differential fluorescence and light scatter characteristics in staining RNA, DNA, and granules of cells)

IT Animal cell
(mammalian; dye compns. which provide enhanced differential fluorescence and light scatter characteristics in staining RNA, DNA, and granules of cells)

IT Staining, biological
(metachromasia; dye compns. which provide enhanced differential fluorescence and light scatter characteristics in staining RNA, DNA, and granules of cells)

IT Intercalating agents
(metachromatic dye as; dye compns. which provide enhanced differential fluorescence and light scatter characteristics in staining RNA, DNA, and granules of cells)

IT Dyes
(metachromatic; dye compns. which provide enhanced differential fluorescence and light scatter characteristics in staining RNA, DNA, and granules of cells)

IT Dyes
(nonintercalating, competing with first fluorescent dye for binding to nonspecific binding sites; dye compns. which provide enhanced differential fluorescence and light scatter characteristics in staining RNA, DNA, and granules of cells)

IT Erythrocyte
(nucleated; dye compns. which provide enhanced differential fluorescence and light scatter characteristics in staining

RNA, DNA, and granules of cells)

IT Spheres
(permeabilizing agent as sphering agent; dye compns. which provide enhanced differential fluorescence and light scatter characteristics in staining RNA, DNA, and granules of cells)

IT Biological transport
(permeation, agent enhancing, in dye composition; dye compns. which provide enhanced differential fluorescence and light scatter characteristics in staining RNA, DNA, and granules of cells)

IT Gallus domesticus
(red cells of; dye compns. which provide enhanced differential fluorescence and light scatter characteristics in staining RNA, DNA, and granules of cells)

IT 65-61-2, Acridine Orange 83-89-6, Quinacrine 92-31-9, Toluidine Blue 92-32-0, Pyronin Y 135-57-9, Bisbenzamide 553-24-2, Neutral Red 1400-62-0, Orcein 2465-27-2, Auramine O 2465-29-4, Acridine Red 3056-93-7, Basic Orange 21 6493-05-6, Pentoxiphylline 17372-87-1, Eosin Y 18472-87-2, Phloxine B 23491-45-4, Hoechst 33258 23491-52-3, Hoechst 33342 23555-00-2, Hoechst 34580 25535-16-4, Propidium iodide 47165-04-8, DAPI 48198-86-3D, derivs. 64431-93-2 75168-11-5, Acridine Orange 10-nonyl bromide 76433-29-9, LDS 751 107091-89-4, Thiazole Orange 157199-63-8, TO-PRO-3
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); BUU (Biological use, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(as dye; dye compns. which provide enhanced differential fluorescence and light scatter characteristics in staining RNA, DNA, and granules of cells)

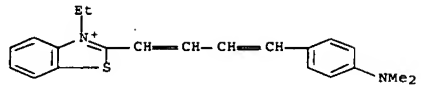
IT 14933-08-5, n-Dodecyl-N,N-dimethyl-3-ammonio-1-propanesulfonate 69227-93-6, n-Dodecyl-β-D-maltoside
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); BUU (Biological use, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(as sphering agent in dye composition; dye compns. which provide enhanced differential fluorescence and light scatter characteristics in staining RNA, DNA, and granules of cells)

IT 76433-29-9, LDS 751 107091-89-4, Thiazole Orange 157199-63-8, TO-PRO-3
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); BUU (Biological use, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(as dye; dye compns. which provide enhanced differential fluorescence and light scatter characteristics in staining RNA, DNA, and granules of cells)

RN 76433-29-9 HCAPLUS
CN Benzothiazolium, 2-[4-[4-(dimethylamino)phenyl]-1,3-butadien-1-yl]-3-ethyl-, perchlorate (1:1) (CA INDEX NAME)

CM 1

CRN 76433-28-8
CMF C21 H23 N2 S



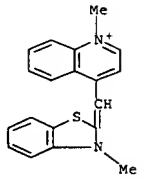
CM 2

CRN 14797-73-0
CMF Cl O4

RN 107091-89-4 HCAPLUS
CN Quinolinium, 1-methyl-4-[(3-methyl-2(3H)-benzothiazolylidene)methyl]-, 4-methylbenzenesulfonate (1:1) (CA INDEX NAME)

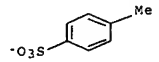
CM 1

CRN 24144-08-9
CMF C19 H17 N2 S

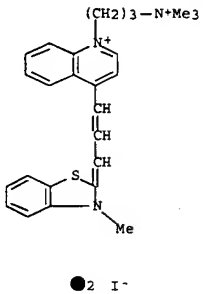


CM 2

CRN 16722-51-3
CMF C7 H7 O3 S



RN 157199-63-8 HCAPLUS
CN Quinolinium, 4-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propen-1-yl]-1-[3-(trimethylammonio)propyl]-, iodide (1:2) (CA INDEX NAME)



REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 16 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:589685 HCAPLUS Full-text
DOCUMENT NUMBER: 141:118285
TITLE: Use of sensor arrays containing hairpin probes for detecting nucleic acids of pathogens
INVENTOR(S): Miller, Benjamin L.; Krauss, Todd D.; Du, Hui; Crnkovich, Nicole; Strohsahl, Christopher M.
PATENT ASSIGNEE(S): University of Rochester, USA
SOURCE: PCT Int. Appl., 73 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004061127	A2	20040722	WO 2004-US93	20040102
WO 2004061127	A3	20050630		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ				
CA 2511874	A1	20040722	CA 2004-2511874	20040102
US 2007059693	A1	20070315	US 2005-541044	20050624
PRIORITY APPLN. INFO.:			US 2003-437780P P	20030102
			WO 2004-US93 W	20040102

AB The present invention provides use of sensor arrays containing hairpin probes for detecting nucleic acids of pathogens. Various nucleic acid probes,

methods of making the sensor chip, biol. sensor devices that contain the sensor chip, and their methods of use are also disclosed.
IC ICM C12Q
CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 9, 10, 14
IT Acinetobacter calcoaceticus
Actinobacillus
Adenoviridae
Aeromonas hydrophila
Arbovirus
Arizona hinshawii
Ateline herpesvirus
Avalanche photodiodes
Avian leukosis virus
Bacillus anthracis
Bartonella
Biomarkers
Biosensors
Blastomyces dermatitidis
Bordetella
Borrelia
Bovine leukemia virus
Bovine papillomavirus
Brucella
Cache Valley virus
Campylobacter
Charge coupled devices
Chlamydia
Clostridium
Coccidioides immitis
Coronavirus
Corynebacterium
Cryptococcus neoformans
Cytomegalovirus
DNA microarray technology
Dengue virus
Dermatophilus congolensis
Disease, animal
Ebola virus
Edwardsiella tarda
Encephalomyocarditis virus
Entamoeba histolytica
Erysipelothrix rhusiopathiae
Escherichia coli
Eubacteria
Feline leukemia virus
Feline sarcoma virus
Flanders virus
Fluorometry
Fowl adenovirus 1
Francisella tularensis
Fungi
Fusobacterium necrophorum
Gallid herpesvirus
Genetic polymorphism
Haemophilus
Hart Park virus
Hepatitis virus
Herpes virus B
Herpesviridae

Histoplasma
Human
Human coxsackievirus A
Human coxsackievirus B
Human echovirus
Human herpesvirus 3
Human herpesvirus 4
Human parainfluenza virus
Human poliovirus
Influenza virus
Klebsiella
Langat virus
Lasers
Lassa virus
Legionella pneumophila
Leishmania
Leptospira interrogans
Listeria
Lymphocytic choriomeningitis virus
Marburg virus
Mason-Pfizer monkey virus
Measles virus
Monkeypox virus
Moraxella
Mouse mammary tumor virus
Mumps virus
Murine leukemia virus
Murine sarcoma virus
Mycobacterium
Mycobacterium avium
Mycoplasma
Naegleria gruberi
Neisseria
Nocardia
Nucleic acid hybridization
Paracoccidioides brasiliensis
Parasite
Pasteurella
Pathogen
Photodiodes
Photomultipliers
Pneumocystis carinii
Polyomavirus
Poxviridae
Pseudomonas
Pseudonocardia autotrophica
Rabbit fibroma virus
Rabies virus
Rat leukemia virus
Reoviridae
Respiratory syncytial virus
Rhinovirus
Rhodococcus
Rous sarcoma virus
Rubella virus
Saimiriine herpesvirus
Salmonella
Schistosoma mansoni
Shigella
Shope papilloma virus

Simian virus 40
Sindbis virus
Staphylococcus aureus
Streptobacillus moniliformis
Streptococcus
Tensaw virus
Tick-borne encephalitis virus
Toxocara canis
Toxoplasma gondii
Treponema
Trichinella spiralis
Trypanosoma cruzi
Turlock virus
Vaccinia virus
Venezuelan equine encephalitis virus
Vesicular stomatitis virus
Vibrio
Virus
Woolly monkey sarcoma virus
Yaba monkey tumor virus
Yellow fever virus
Yersinia
(use of sensor arrays containing hairpin probes for detecting nucleic acids of pathogens)

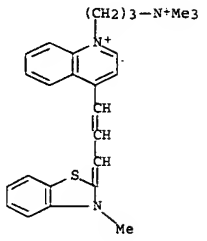
IT 81-88-9D, RhodamineB, probe conjugate 92-32-0D, Pyronin Y, probe conjugate 1461-15-0D, Calcein, probe conjugate 7385-67-3D, Nile red, probe conjugate 13558-31-1D, Rhodamine 110, probe conjugate 27072-45-3D, Fitc, probe conjugate 41085-99-8D, DiI, probe conjugate 62669-70-9D, Rhodamine 123, probe conjugate 76823-03-5D, 5-Carboxyfluorescein, probe conjugate 82354-19-6D, Texas red, probe conjugate 82855-40-1D, Joe, probe conjugate 99752-92-8D, Rhodamine red, probe conjugate 107347-53-5D, Tritc, probe conjugate 120718-39-0D, Rox, probe conjugate 120718-52-7D, Tamra, probe conjugate 127274-91-3D, DiD, probe conjugate 138067-54-6D, Calcium crimson, probe conjugate 138067-55-7D, Calcium green, probe conjugate 138067-56-8D, Calcium orange, probe conjugate 143413-84-7D, TOTO-1, probe conjugate 143413-85-8D, Yoyo-1, probe conjugate 150173-72-1D, Bodipy 558/568, probe conjugate 150173-89-0D, Bodipy 564/570, probe conjugate 152068-09-2D, Yo-pro-1, probe conjugate 156312-20-8D, Yoyo-3, probe conjugate 157199-59-2D, TO-PRO-1, probe conjugate 157199-62-7D, Yo-pro-3, probe conjugate 157199-63-8D, To-pro-3, probe conjugate 166196-17-4D, Toto-3, probe conjugate 170516-41-3D, Magnesium green, probe conjugate 172777-84-3D, Cy5.5, probe conjugate 187089-10-7D, BODIPY 530/550, probe conjugate 189200-71-3D, Rhodamine green, probe conjugate 189767-45-1D, Cy3.5, probe conjugate 189767-52-0D, FluorX, probe conjugate 195136-58-4D, Oregon green 488, probe conjugate 220751-06-4D, Ribogreen, probe conjugate 247145-23-9D, Alexa 546, probe conjugate 247145-86-4D, Alexa 594, probe conjugate 915013-10-4D, Rhodamine phalloidin, probe conjugate
RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study);
USES (Uses)
(use of sensor arrays containing hairpin probes for detecting nucleic acids of pathogens)

IT 157199-63-8D, To-pro-3, probe conjugate 166196-17-4D, Toto-3, probe conjugate
RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study);
USES (Uses)
(use of sensor arrays containing hairpin probes for detecting nucleic acids

of pathogens)

RN 157199-63-8 HCAPLUS

CN Quinolinium, 4-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propen-1-yl]-1-[3-(trimethylammonio)propyl]-, iodide (1:2) (CA INDEX NAME)

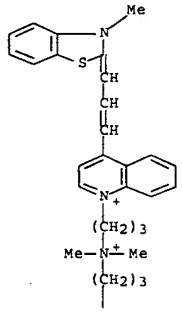


●2 I-

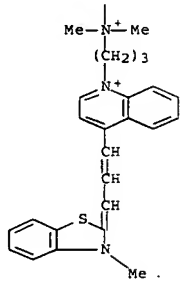
RN 166196-17-4 HCAPLUS

CN Quinolinium, 1,1'-[1,3-propanediylbis[(dimethyliminio)-3,1-propanediyl]]bis[4-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propen-1-yl]-, iodide (1:4) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



●4 I-

L80 ANSWER 17 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:392699 HCAPLUS Full-text

DOCUMENT NUMBER: 140:371469

TITLE: A method for assessment of particles

INVENTOR(S): Larsen, Rasmus Dines; Hansen, Frans Ejner Ravn

PATENT ASSIGNEE(S): Chemometec A/s, Den.

SOURCE: PCT Int. Appl., 70 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004040314	A1	20040513	WO 2003-DK743	20031031
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003275940	A1	20040525	AU 2003-275940	20031031
EP 1558934	A1	20050803	EP 2003-809704	20031031
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2006504937	T	20060209	JP 2004-547451	20031031
US 2006063146	A1	20060323	US 2005-533324	20050812
PRIORITY APPLN. INFO.:			DK 2002-1653 A	20021031
			WO 2003-DK743 W	20031031

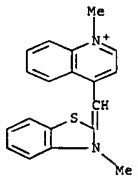
AB The invention relates to imaging methods for assessing quality or quantity parameters of particles in a sample, wherein the particles contain less than 106 analyte detectable positions. The method comprises (1) mixing the sample with a targeting species capable of binding an analyte position and a labeling agent, (2) arranging the sample in an exposing domain, allowing

electromagnetic signals from the sample to pass to the exterior, (3) exposing a representation of said signals onto an array of detection elements, wherein the representation is subject to a linear enlargement, so that the ratio of the image of a linear dimension on the array of detection elements to the original linear dimension in the exposing domain is smaller than 20:1, (4) detecting the representation as intensities by said detection elements, (5) processing the intensities to identify the particles, and (6) obtaining the quality or quantity parameter.

IC ICM G01N033-58
CC 9-4 (Biochemical Methods)
IT Blood cell
Cell
Eubacteria
Human
Nucleic acid hybridization
Staining, biological
Virus
cDNA sequences
(method for assessment of particles)
IT 65-61-2, Acridine orange 2321-07-5, Fluorescein 7240-37-1, 7-Aminoactinomycin d 25535-16-4, Propidium iodide 27072-45-3, FITC 47165-04-8, DAPI 64457-77-8, Ethidium iodide 107091-89-4, Thiazole orange 146368-14-1, Cy5 146368-16-3, Cy3 172777-84-3, Cy5.5
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(method for assessment of particles)
IT 107091-89-4, Thiazole orange
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(method for assessment of particles)
RN 107091-89-4 HCAPLUS
CN Quinolinium, 1-methyl-4-[(3-methyl-2(3H)-benzothiazolylidene)methyl]-, 4-methylbenzenesulfonate (1:1) (CA INDEX NAME)

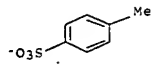
CM 1

CRN 24144-08-9
CMF C19 H17 N2 S



CM 2

CRN 16722-51-3
CMF C7 H7 O3 S



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 18 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:757324 HCAPLUS Full-text
DOCUMENT NUMBER: 139:272000
TITLE: Method for modifying transcription and/or translation in an organism by heteropolymeric probes and duplex, triplex or quadruplex hybridization for therapeutic, prophylactic and/or analytic uses
INVENTOR(S): Erikson, Glen H.
PATENT ASSIGNEE(S): Ingeneus Corporation, Barbados
SOURCE: U.S. Pat. Appl. Publ., 54 pp., Cont.-in-part of U.S. Ser. No. 909,496.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 15
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003181412	A1	20030925	US 2003-438151	20030514
US 6403313	B1	20020611	US 1999-468679	19991221
US 6420115	B1	20020716	US 2000-613263	20000710
US 6900300	B1	20050531	US 2000-664827	20000919
US 2002031775	A1	20020314	US 2001-909496	20010720
US 6656692	B2	20031202		
WO 2004100636	A2	20041125	WO 2003-IB5624	20030924
WO 2004100636	A3	20050317		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003282322	A1	20041203	AU 2003-282322	20030924
ZA 2005009517	A	20060726	ZA 2005-9517	20051124

PRIORITY APPLN. INFO.:

US 1999-468679	A2	19991221
US 2000-613263	A2	20000710
US 2000-664827	A2	20000919
US 2001-909496	A2	20010720
US 2003-438151	A	20030514
WO 2003-IB5624	W	20030924

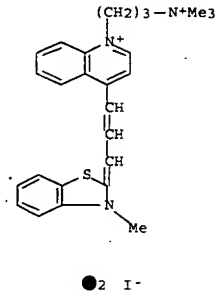
AB The invention relates to a method for modifying gene expression for therapeutic and/or prophylactic purposes, and more particularly to such a method wherein duplex, triplex and/or quadruplex complexes are formed by specific binding between single-stranded or double-stranded nucleobase-

containing probes, utilizing fluorescent intercalating dyes, and single-stranded or double-stranded nucleobase-containing target sequences. A method for modifying transcription and/or translation in an organism includes administering to the organism a composition containing a probe containing a heteropolymeric probe sequence of nucleic acids or nucleic acid analogs; and binding the probe to a target, wherein the target is in the organism and contains a heteropolymeric target sequence of nucleic acids. The heteropolymeric probe sequence is bonded to the heteropolymeric target sequence to form a complex by Watson-Crick complementary base interaction or by homologous base interaction, provided that when the complex is a duplex and the heteropolymeric probe sequence is antiparallel to the heteropolymeric target sequence, the heteropolymeric probe sequence is bonded to the heteropolymeric target sequence by homologous base interaction, and provided that when the complex is a triplex, the complex is preferably free of RecA protein. The efficiency of parallele homologous ssDNA:ssDNA duplex formation for exon 10 of the human cystic fibrosis gene was demonstrated in the presence of a complex promoting agent such as YOYO-1. Triplex and quadruplex formation was also demonstarted.

IC ICM A61K048-00
ICS C12Q001-68
INCL 514044000; 435006000
CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 1, 9
IT Dyes
(staining nucleic acids; method for modifying transcription and/or translation in organism by heteropolymeric probes and duplex, triplex or quadruplex hybridization for therapeutic, prophylactic and/or analytic uses)
IT Eubacteria
Fungi
Virus
(target nucleic acid from; method for modifying transcription and/or translation in organism by heteropolymeric probes and duplex, triplex or quadruplex hybridization for therapeutic, prophylactic and/or analytic uses)
IT 65-61-2, Acridine orange 260-94-6, Acridine 260-94-6D, Acridine, derivs. 1239-45-8, Ethidium bromide 3546-21-2D, Ethidium, derivs. 7240-37-1, 7-Aminoactinomycin D 25535-16-4, Propidium iodide 61926-22-5, Ethidium homodimer-1 68942-32-5, Ethidiumacridine heterodimer 143413-84-7, TOTO-1 143413-85-8, YOYO-1 152068-09-2, YOPRO-1 154757-99-0, POPO-3 156312-20-8, YOYO-3 157199-56-9, POPRO-1 157199-57-0, BOPRO-1 157199-59-2, TOPRO-1 157199-62-7, YOPRO-3 157199-63-8, TOPRO-3 161016-55-3, POPRO-3 163795-75-3, SYBR Green I 166196-17-4, TOTO-3 169454-13-1, BOBO-1 169454-15-3, POPO-1 169454-17-5, BOBO-3 173357-16-9, BOPRO-3 177027-61-1, TOPRO-5 177571-06-1, Pico Green 180389-01-9, Ethidium homodimer-2 194100-76-0, SYTOX green 208540-89-0, SYTO 9 217087-73-5, SYBR green 305801-86-9, JOPRO-1 305801-87-0, JOJO-1 305802-06-6, LOLO-1 305802-07-7, LOPRO-1
RL: ARG (Analytical reagent use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(probe comprises binding promoter; method for modifying transcription and/or translation in organism by heteropolymeric probes and duplex, triplex or quadruplex hybridization for therapeutic, prophylactic and/or analytic uses)
IT 157199-63-8, TOPRO-3 166196-17-4, TOTO-3
RL: ARG (Analytical reagent use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(probe comprises binding promoter; method for modifying transcription

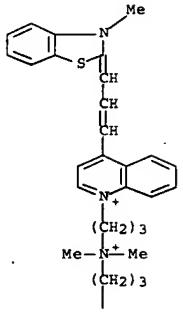
and/or translation in organism by heteropolymeric probes and duplex, triplex or quadruplex hybridization for therapeutic, prophylactic and/or analytic uses)

RN 157199-63-8 HCAPLUS
CN Quinolinium, 4-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propen-1-yl]-1-[3-(trimethylammonio)propyl]-, iodide (1:2) (CA INDEX NAME)

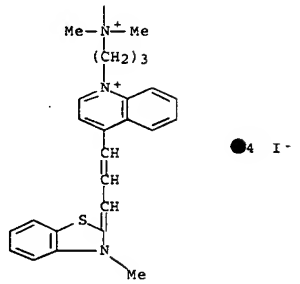


RN 166196-17-4 HCAPLUS
CN Quinolinium, 1,1'-[1,3-propanediylbis[(dimethyliminio)-3,1-propanediyl]]bis[4-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propen-1-yl]-, iodide (1:4) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



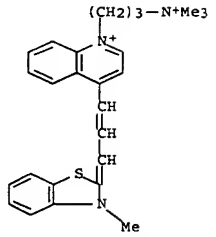
●4 I-

L80 ANSWER 19 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:605001 HCAPLUS Full-text
DOCUMENT NUMBER: 140:283673
TITLE: Optimization of three- and four-color multiparameter DNA analysis in lymphoma specimens
AUTHOR(S): Plander, M.; Brockhoff, G.; Barlage, S.; Schwarz, S.; Rothe, G.; Knuechel, R.
CORPORATE SOURCE: Department of Hematology, University Teaching Hospital of Vas County, Szombathely, Hung.
SOURCE: Cytometry, Part A (2003), 54A(1), 66-74
CODEN: CPAYAV
PUBLISHER: Wiley-Liss, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Background: Simultaneous anal. of DNA and immunophenotype of lymphoma cells by flow cytometry allows the calcn. of the proliferative activity and aneuploidy in even a small lymphoma population. Unfavorable DNA binding characteristics or spectral features of DNA dyes impair the accuracy of multiparameter DNA anal. and limit their clin. application. We describe here a reliable and reproducible application of both three -and four-color multiparameter DNA anal. Methods: After immunostaining of fresh samples of peripheral blood, bone marrow and single cell suspensions of lymph nodes from healthy and lymphoma patients, a methanol fixation for TO-PRO-3 and DRAQ5 staining was tested. Results: The red-excitable TO-PRO-3 on a FACSCalibur is limited to two-color antigen staining including fluorescein-isothiocyanate and phycoerythrin-labeled monoclonal antibodies due to its broad excitation spectrum. Although DRAQ5 is only applicable to flow cytometers equipped with a single argon laser emitting 488-nm light, its emission spectrum can be easily separated from the FITC, PE, and PE/Texas-Red emissions. DRAQ5 showed almost identical stoichiometric DNA binding characteristics as propidium iodide. Coefficient of variation produced by DRAQ5 staining is in the range of 3.5 and is adequate for detecting aneuploid and near-diploid cells. Conclusions: These advantageous features of DRAQ5 make it a reliable candidate for multiparameter clin. studies.

CC 9-5 (Biochemical Methods)
Section cross-reference(s): 6, 13, 14
ST DNA fluorescence staining flow cytometry lymphoma diagnosis
IT Staining, biological
Stains, biological

(fluorescent; flow cytometry three- and four-color multiparameter DNA anal. in lymphoma specimens)
IT 25535-16-4, Propidium iodide 27072-45-3, FITC 82354-19-6, Texas Red 157199-63-8, To-Pro 3 254098-36-7, DRAQ5 422551-33-5, PerCP
RL: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(flow cytometry three- and four-color multiparameter DNA anal. in lymphoma specimens)
IT 157199-63-8, To-Pro 3
RL: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(flow cytometry three- and four-color multiparameter DNA anal. in lymphoma specimens)
RN 157199-63-8 HCAPLUS
CN Quinolinium, 4-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propen-1-yl]-1-[3-(trimethylammonio)propyl]-, iodide (1:2) (CA INDEX NAME)



●2 I-

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 20 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:499067 HCAPLUS Full-text
DOCUMENT NUMBER: 140:267094
TITLE: Interaction of cyanine dyes with nucleic acids: XXXI. Using of polymethine cyanine dyes for the visualization of DNA in agarose gels
AUTHOR(S): Matselyukh, B. P.; Yarmoluk, S. M.; Matselyukh, A. B.; Kovalska, V. B.; Kocheshev, I. O.; Kryvorotenko, D. V.; Lukashov, S. S.
CORPORATE SOURCE: Institute of Microbiology and Virology of the National Academy of Sciences of Ukraine, Kiev, 03143, Ukraine
SOURCE: Journal of Biochemical and Biophysical Methods (2003), 57(1), 35-43
CODEN: JBBMDG; ISSN: 0165-022X
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Fifteen polymethine cyanine dyes were studied as fluorescent stains for DNA in electrophoretic gels. Among studied cyanines, two dyes CPent V and CCyan 2-O most effectively visualized covalently closed and linear double-stranded DNA mols. in gels under standard conditions using UV-illumination, green filter and black-and-white photo film. Ethidium bromide was 1.2-1.6 times more effective as compared to cyanine dyes in staining of DNA in the concentration range of 8-18 ng, while studied cyanines were more sensitive to DNA quantity above 50 ng.

CC 9-16 (Biochemical Methods)

IT Fluorescent dyes
(cyanine; polymethine cyanine dyes for fluorescent staining and visualization of DNA in agarose gels)

IT DNA
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(double-stranded; polymethine cyanine dyes for fluorescent staining and visualization of DNA in agarose gels)

IT Cyanine dyes
Staining, biological
Stains, biological
(fluorescent; polymethine cyanine dyes for fluorescent staining and visualization of DNA in agarose gels)

IT Fluorometry
Gel electrophoresis
Molecular association
(polymethine cyanine dyes for fluorescent staining and visualization of DNA in agarose gels)

IT DNA
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(polymethine cyanine dyes for fluorescent staining and visualization of DNA in agarose gels)

IT 1239-45-8, Ethidium bromide 7423-31-6, Stains-All
106396-46-7 107091-89-4 287966-83-0 333380-50-0
333380-52-2 333380-56-6 333380-61-3 340157-38-2 349081-16-9
351526-14-2 485403-76-7 497220-85-6 569361-79-1 674784-62-4
674784-65-7
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(polymethine cyanine dyes for fluorescent staining and visualization of DNA in agarose gels)

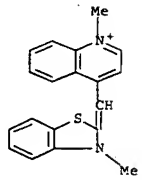
IT 107091-89-4
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(polymethine cyanine dyes for fluorescent staining and visualization of DNA in agarose gels)

RN 107091-89-4 HCAPLUS

CN Quinolinium, 1-methyl-4-[(3-methyl-2(3H)-benzothiazolylidene)methyl]-, 4-methylbenzenesulfonate (1:1) (CA INDEX NAME)

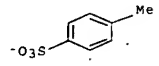
CM 1

CRN 24144-08-9
CMF C19 H17 N2 S



CM 2

CRN 16722-51-3
CMF C7 H7 O3 S



REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 21 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:450245 HCAPLUS Full-text
DOCUMENT NUMBER: 137:30238
TITLE: Immunoassay based on DNA replication using labeled primer
INVENTOR(S): McNally, Alan J.; Wu, Robert S.; Li, Zhuyin
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 26 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002072053	A1	20020613	US 2000-733565	20001208
PRIORITY APPLN. INFO.:			US 2000-733565	20001208

AB The invention concerns an immunoassay method based upon inhibition of a DNA polymerase enzyme accomplished by linking a ligand of the analyte to a primer through a covalent bond. The interaction between the primer-bound ligand and a receptor specific for the ligand inhibits the DNA polymerase enzyme from generating double stranded DNA. The degree of inhibition of double stranded DNA synthesis is inversely proportional to the concentration of analyte in the sample. The analyte is determined by measuring the formation of double stranded DNA, e.g., by a fluorescence DNA intercalation technique.

IC ICM C12Q001-68
INCL 435006000
CC 9-10 (Biochemical Methods)

Section cross-reference(s): 3, 6

IT Concentration (condition)
DNA replication
DNA sequences
Drugs
Immunoassay
Labels
Test kits
Urine analysis
(immunoassay based on DNA replication using labeled primer)

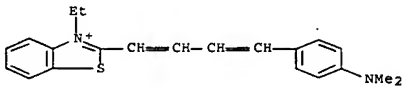
IT 65-61-2, Acridine orange 495-99-8, Hydroxystilbamidine 1239-45-8, Ethidium bromide 3546-21-2D, Ethidium, homodimers 3548-09-2, 9-Amino-6-chloro-2-methoxyacridine 7240-37-1, 7-Aminoactinomycin D 23491-45-4, Bisbenzimide 25535-16-4, Propidium iodide 47165-04-8, DAPI 58880-05-0, Ethidium monoazide 76433-29-9, LDS-751 104821-25-2, Hydroethidine 143413-85-8, YOYO-1 161622-27-1, FluoroNissl Green 177571-06-1, PicoGreen 211566-66-4, Hexidium iodide
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(immunoassay based on DNA replication using labeled primer)

IT 76433-29-9, LDS-751
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(immunoassay based on DNA replication using labeled primer)

RN 76433-29-9 HCAPLUS
CN Benzothiazolium, 2-[4-[4-(dimethylamino)phenyl]-1,3-butadien-1-yl]-3-ethyl-, perchlorate (1:1) (CA INDEX NAME)

CM 1

CRN 76433-28-8
CMF C21 H23 N2 S



CM 2

CRN 14797-73-0
CMF Cl O4

L80 ANSWER 22 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:349175 HCAPLUS Full-text
DOCUMENT NUMBER: 136:352289
TITLE: Method of staining, detecting and counting bacteria, and a diluent for bacterial stain
INVENTOR(S): Sakai, Yasuhiro; Kawashima, Yasuyuki; Inoue, Junya; Ikeuchi, Yoshito
PATENT ASSIGNEE(S): Sysmex Corporation, Japan
SOURCE: Eur. Pat. Appl., 16 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1203825	A2	20020508	EP 2001-125418	20011031
EP 1203825	A3	20040204		
EP 1203825	B1	20050921		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2002076743	A1	20020620	US 2001-5753	20011029
JP 2002202302	A	20020719	JP 2001-335117	20011031
JP 3888876	B2	20070307		
AT 305050	T	20051015	AT 2001-125418	20011031
PT 1203825	T	20051130	PT 2001-125418	20011031
ES 2244540	T3	20051216	ES 2001-1125418	20011031
US 2004175781	A1	20040909	US 2004-803667	20040318
PRIORITY APPLN. INFO.:			JP 2000-334641 A	20001101
			US 2001-5753 A3	20011029

OTHER SOURCE(S): MARPAT 136:352289

AB A method of staining bacteria comprises: working a polymethine dye on a sample in the presence of a substance capable of reducing nitrite ions to stain bacteria in the sample. A method of detecting bacteria comprises the following steps of: (1) working a polymethine dye on a sample by a method as described above to stain bacteria in the sample, (2) introducing the thus treated sample into a detecting part of a flow cytometer and irradiating cells of the stained bacteria one by one with light to measure scattered light and fluorescent light emitted from each of the cells; and (3) discriminating the bacteria from other components in accordance with an intensity of a scattered light signal and an intensity of a fluorescent light signal or a pulse width reflecting the length of particles to count the bacteria.

IC ICM C12Q001-04
ICS G01N001-30

CC 9-4 (Biochemical Methods)
Section cross-reference(s): 10

ST staining detecting counting bacteria diluent bacterial stain

IT Alkyl groups
(C1-3 or C1-18 or C6-18; method of staining, detecting and counting bacteria, and a diluent for bacterial stain)

IT Functional groups
(alkoxy groups, C1-3; method of staining, detecting and counting bacteria, and a diluent for bacterial stain)

IT Cytometry
(apparatus, flow; method of staining, detecting and counting

bacteria, and a diluent for bacterial stain
)
IT Functional groups
(benzyl group; method of staining, detecting and counting bacteria, and a diluent for bacterial stain
)
IT Surfactants
(cationic; method of staining, detecting and counting bacteria, and a diluent for bacterial stain
)
IT Anions
(compds. containing; method of staining, detecting and counting bacteria, and a diluent for bacterial stain
)
IT Measuring apparatus
(cytometers, flow; method of staining, detecting and counting bacteria, and a diluent for bacterial stain
)
IT Halogens
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(ions; method of staining, detecting and counting bacteria, and a diluent for bacterial stain
)
IT Acyl groups
Blood analysis
Body fluid
Buffers
Cerebrospinal fluid
Chemical formula
Cyanine dyes
Dilution
Dyes
Eubacteria
Flow cytometry
Fluorometry
Length
Light
Light scattering
Optical reflection
Particles
Radiation
Reducing agents
Samples
Solutions
Staining, biological
Stains, biological
Urine analysis
pH
(method of staining, detecting and counting bacteria, and a diluent for bacterial stain)
IT Acids, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(method of staining, detecting and counting bacteria, and a diluent for bacterial stain)
IT Nitrates, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(method of staining, detecting and counting bacteria, and a diluent for bacterial stain)

IT Quaternary ammonium compounds, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(method of staining, detecting and counting bacteria, and a diluent for bacterial stain)
IT Salts, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(method of staining, detecting and counting bacteria, and a diluent for bacterial stain)
IT Sulfates, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(method of staining, detecting and counting bacteria, and a diluent for bacterial stain)
IT 14797-65-0, Nitrite ion, biological studies
RL: BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent)
(method of staining, detecting and counting bacteria, and a diluent for bacterial stain)
IT 50-21-5, Lactic acid, biological studies 56-40-6, Glycine, biological studies 60-32-2, ε-Aminocaproic acid 77-92-9, Citric acid, biological studies 107-95-9, β-Alanine 110-15-6, Succinic acid, biological studies 110-17-8, Fumaric acid, biological studies 877-24-7, Potassium hydrogen phthalate 1119-97-7, Tetradecyl trimethylammonium bromide 1310-73-2, Sodium hydroxide (Na(OH)), biological studies 1333-74-0D, Hydrogen, compds. containing 6899-10-1 7440-44-0D, Carbon, compds. containing 7558-79-4, Disodium hydrogen phosphate 7647-01-0, Hydrochloric acid, biological studies 7704-34-9D, Sulfur, compds. containing 7778-77-0, Potassium dihydrogen phosphate 7782-44-7D, Oxygen, compds. containing 10182-91-9 10182-92-0 15053-09-5 15461-40-2 76433-27-7 76433-29-9 150749-57-8 157199-63-8 166196-17-4 189148-50-3 335080-22-3 361544-71-0 361544-72-1
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(method of staining, detecting and counting bacteria, and a diluent for bacterial stain)
IT 50-81-7, Ascorbic acid, biological studies 52-90-4, Cysteine, biological studies 56-84-8, Aspartic acid, biological studies 56-85-9, Glutamine, biological studies 56-86-0, Glutamic acid, biological studies 57-13-6, Urea, biological studies 60-24-2, Mercaptoethanol 63-68-3, Methionine, biological studies 63-74-1, Sulfanilamide 68-11-1, Mercaptoacetic acid, biological studies 70-18-8, Glutathione, biological studies 70-47-3, Asparagine, biological studies 74-89-5, Aminomethane, biological studies 89-65-6, Isoascorbic acid 107-35-7 107-96-0, 3-Mercaptopropionic acid 108-98-5, Thiophenol, biological studies 121-57-3, Sulfanilic acid 5329-14-6, Sulfamic acid 6303-21-5, Phosphinic acid 7782-99-2, Sulfurous acid, biological studies 7803-49-8, Hydroxylamine, biological studies 7803-49-8D, Hydroxylamine, salts 13881-91-9, Aminomethanesulfonic acid 33669-61-3, Pyrosulfurous acid
RL: BUU (Biological use, unclassified); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(method of staining, detecting and counting bacteria, and a diluent for bacterial stain)
IT 24147-36-2, Thiazole orange
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(thiazole orange; method of staining, detecting and counting

bacteria, and a diluent for bacterial stain
)

IT 76433-27-7 76433-29-9 150749-57-8
157199-63-8 166196-17-4 189148-50-3
335080-22-3 361544-71-0 361544-72-1
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(method of staining, detecting and counting bacteria , and a diluent for bacterial stain)

RN 76433-27-7 HCAPLUS
CN 3H-Indolium, 2-[4-[4-(dimethylamino)phenyl]-1,3-butadienyl]-1,3,3-trimethyl-, perchlorate (9CI) (CA INDEX NAME)

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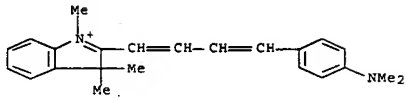
CRN 76433-26-6
CMF C23 H27 N2



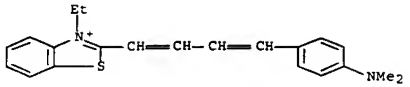
CM 2

CRN 14797-73-0
CMF Cl O4

RN 76433-29-9 HCAPLUS
CN Benzothiazolium, 2-[4-[4-(dimethylamino)phenyl]-1,3-butadien-1-yl]-3-ethyl-, perchlorate (1:1) (CA INDEX NAME)

CM 1

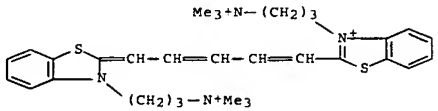
CRN 76433-28-8
CMF C21 H23 N2 S



CM 2

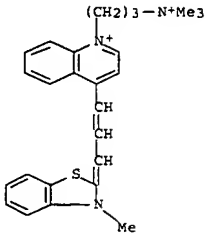
CRN 14797-73-0
CMF Cl O4

RN 150749-57-8 HCAPLUS
CN Benzothiazolium, 3-[3-(trimethylammonio)propyl]-2-[5-[3-[3-(trimethylammonio)propyl]-2(3H)-benzothiazolylidene]-1,3-pentadienyl]-, tribromide (9CI) (CA INDEX NAME)



●3 Br-

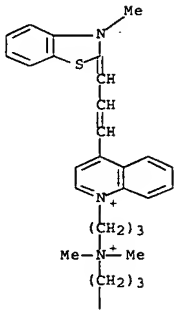
RN 157199-63-8 HCAPLUS
CN Quinolinium, 4-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propen-1-yl]-1-[3-(trimethylammonio)propyl]-, iodide (1:2) (CA INDEX NAME)



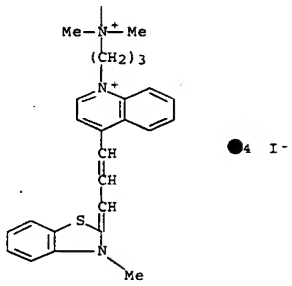
●2 I-

RN 166196-17-4 HCAPLUS
CN Quinolinium, 1,1'-[1,3-propanediylbis[(dimethyliminio)-3,1-propanediyl]]bis[4-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propen-1-yl]-, iodide (1:4) (CA INDEX NAME)

PAGE 1-A



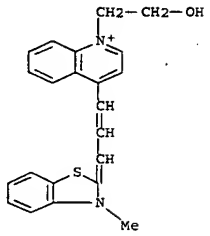
PAGE 2-A



RN 189148-50-3 HCAPLUS
CN Quinolinium, 1-(2-hydroxyethyl)-4-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propenyl]-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

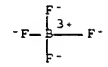
CM 1

CRN 189148-49-0
CMF C22 H21 N2 O S



CM 2

CRN 14874-70-5
CMF B F4
CCI CCS

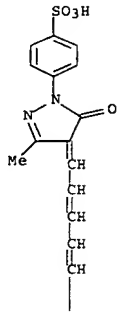


RN 335080-22-3 HCAPLUS
CN Benzenesulfonic acid, 4-[4-[5-(1,3-dibutylhexahydro-4,6-dioxo-2-thioxo-5-pyrimidinyl)-2,4-pentadienylidene]-4,5-dihydro-3-methyl-5-oxo-1H-pyrazol-1-yl]-, compd. with N,N-diethylethanamine (1:2) (9CI) (CA INDEX NAME)

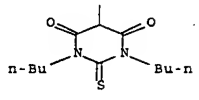
CM 1

CRN 118702-42-4
CMF C27 H32 N4 O6 S2

PAGE 1-A



PAGE 2-A

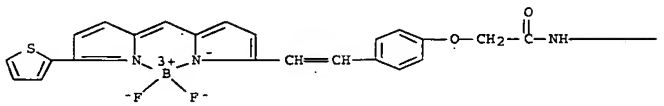


CM 2

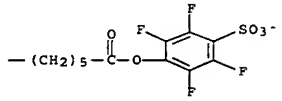
CRN 121-44-8
CMF C6 H15 N

RN 361544-71-0 HCAPLUS
CN Borate(1-), difluoro[2,3,5,6-tetrafluoro-4-sulfophenyl 6-[[[4-[2-[5-[[5-(2-thienyl)-2H-pyrrol-2-ylidene-κN]methyl]-1H-pyrrol-2-yl-κN]ethenyl]phenoxy]acetyl]amino]hexanoato(2-)]-, sodium, (T-4)- (9CI) (CA INDEX NAME)

PAGE 1-A

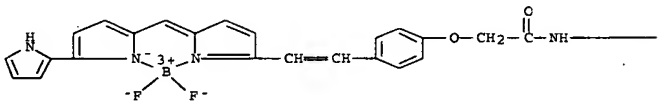


PAGE 1-B

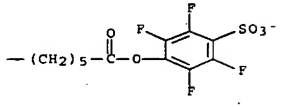


RN 361544-72-1 HCAPLUS
CN Borate(1-), difluoro[2,3,5,6-tetrafluoro-4-sulfophenyl 6-[[[4-[2-[2-[([2,2'-bi-1H-pyrrol]-5-yl-κN1)methylene]-2H-pyrrol-5-yl-κN]ethenyl]phenoxy]acetyl]amino]hexanoato(2-)]-, sodium, (T-4)- (9CI) (CA INDEX NAME)

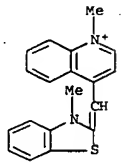
PAGE 1-A



PAGE 1-B



IT 24147-36-2, Thiazole orange
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(thiazole orange; method of staining, detecting and counting bacteria, and a diluent for bacterial stain
)
RN 24147-36-2 HCAPLUS
CN Quinolinium, 1-methyl-4-[(3-methyl-2(3H)-benzothiazolylidene)methyl]-, iodide (1:1) (CA INDEX NAME)



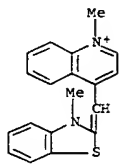
● I-

L80 ANSWER 23 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:764185 HCAPLUS Full-text
DOCUMENT NUMBER: 136:289517
TITLE: PNA-based light-up probes for real-time detection of sequence-specific PCR products
AUTHOR(S): Wolffs, Petra; Knutsson, Rickard; Sjoback, Robert; Radstrom, Peter
CORPORATE SOURCE: Lund University, Lund, Swed.
SOURCE: BioTechniques (2001), 31(4), 766,769-771
CODEN: BTNQDO; ISSN: 0736-6205
PUBLISHER: Eaton Publishing Co.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The aim of this study was to introduce the use of a peptide nucleic acid (PNA)-thiazole orange conjugate for real-time monitoring of PCR. When the so-called light-up probes hybridize sequence-specifically to the PCR product, an increase in the fluorescent signal is obtained. It was found that the light-up probe can quant. measure the amount of DNA or intact bacterial cells in the reaction mixture, without interfering with the PCR amplification. A linear detection range of at least 4 log units was obtained without optimization of the system. The detection limit of this light-up assay per reaction mixture was 0.4 pg genomic Yersinia enterocolitica DNA.

CC 3-1 (Biochemical Genetics)
IT DNA
RL: ANT (Analyte); ANST (Analytical study)
(crude bacterial extract or purified; PNA-based light-up probes for real-time detection of sequence-specific PCR products)
IT 24147-36-2D, Thiazole orange, conjugates with peptide nucleic acid
RL: ARG (Analytical reagent use); ANST (Analytical

study); USES (Uses)
(thiazole orange; PNA-based light-up probes for real-time detection of sequence-specific PCR products)
IT 24147-36-2D, Thiazole orange, conjugates with peptide nucleic acid
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(thiazole orange; PNA-based light-up probes for real-time detection of sequence-specific PCR products)
RN 24147-36-2 HCAPLUS
CN Quinolinium, 1-methyl-4-[(3-methyl-2(3H)-benzothiazolylidene)methyl]-, iodide (1:1) (CA INDEX NAME)



● I-

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 24 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:702413 HCAPLUS Full-text
DOCUMENT NUMBER: 135:254110
TITLE: Method for staining and detecting bacteria
INVENTOR(S): Inoue, Junya; Ikeuchi, Yoshiro; Kawashima, Yasuyuki
PATENT ASSIGNEE(S): Sysmex Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001258590	A	20010925	JP 2000-80998	20000322
JP 3837006	B2	20061025		
EP 1136563	A2	20010926	EP 2001-201027	20010320
EP 1136563	A3	20040121		
EP 1136563	B1	20060607		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY, TR				
AT 329051	T	20060615	AT 2001-201027	20010320
PRIORITY APPLN. INFO.:			JP 2000-80998 A	20000322
OTHER SOURCE(S):	MARPAT 135:254110			

AB A rapid and efficient method is provided for staining and detecting bacteria even in the presence of impurities in a sample (e.g., urine , blood) without culturing it. In this method, a cationic surfactant is added to the sample containing bacteria to promote its dye-permeability. Then, the bacteria is stained with a dye (e.g., fluorescent dye), and detected by flow cytometry.

IC ICM C12Q001-06
ICS C12Q001-04; G01N033-48; C12Q001-06; C12R001-01

CC 9-16 (Biochemical Methods)
Section cross-reference(s): 10

ST bacteria staining fluorescent dye cationic surfactant

IT Surfactants
(cationic; method for staining and detecting bacteria
)

IT Cytometry
(flow; method for staining and detecting bacteria)

IT Bacteria (Eubacteria)
Blood analysis
Buffers
Citrobacter freundii
Dyes
Enterococcus faecalis
Escherichia coli
Fluorescent dyes
Fluorometry
Impurities
Klebsiella pneumoniae
Light scattering
Permeability
Pseudomonas
Staining, biological
Staphylococcus
Streptococcus aureus
Urine analysis
pH
(method for staining and detecting bacteria)

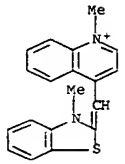
IT Nitrates, biological studies
Quaternary ammonium compounds, biological studies
Sulfates, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(method for staining and detecting bacteria)

IT 50-21-5, Lactic acid, biological studies 56-40-6, Glycine, biological studies 60-32-2, ε-Aminocaproic acid 77-92-9D, Citric acid, salt 88-99-3D, Phthalic acid, salt 107-95-9, β-Alanine 110-15-6, Succinic acid, biological studies 110-17-8, Fumaric acid, biological studies 6899-10-1 10182-91-9 10182-92-0, Tetradecyltrimethylammonium 14265-44-2, Phosphate, biological studies 15053-09-5, Decyltrimethylammonium 15461-40-2, Octadecyltrimethylammonium 24147-36-2 76433-27-7 76433-29-9 150749-57-8 157199-63-8 166196-17-4 361437-94-7 361544-71-0 361544-72-1
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(method for staining and detecting bacteria)

IT 24147-36-2 76433-27-7 76433-29-9 150749-57-8 157199-63-8 166196-17-4 361437-94-7 361544-71-0 361544-72-1
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(method for staining and detecting bacteria)

RN 24147-36-2 HCAPLUS
CN Quinolinium, 1-methyl-4-[(3-methyl-2(3H)-benzothiazolylidene)methyl]-, iodide (1:1) (CA INDEX NAME)

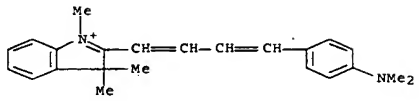


● I⁻

RN 76433-27-7 HCAPLUS
CN 3H-Indolium, 2-[4-[4-(dimethylamino)phenyl]-1,3-butadienyl]-1,3,3-trimethyl-, perchlorate (9CI) (CA INDEX NAME)

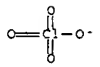
CM 1

CRN 76433-26-6
CMF C23 H27 N2



CM 2

CRN 14797-73-0
CMF Cl O4

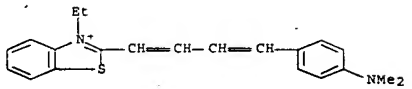


RN 76433-29-9 HCAPLUS
CN Benzothiazolium, 2-[4-[4-(dimethylamino)phenyl]-1,3-butadien-1-yl]-3-ethyl-

, perchlorate (1:1) (CA INDEX NAME)

CM 1

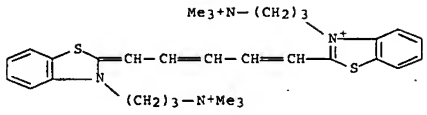
CRN 76433-28-8
CMF C21 H23 N2 S



CM 2

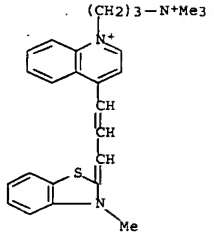
CRN 14797-73-0
CMF Cl O4

RN 150749-57-8 HCAPLUS
CN Benzothiazolium, 3-[3-(trimethylammonio)propyl]-2-[5-[3-[3-(trimethylammonio)propyl]-2(3H)-benzothiazolylidene]-1,3-pentadienyl]-, tribromide (9CI) (CA INDEX NAME)



●3 Br⁻

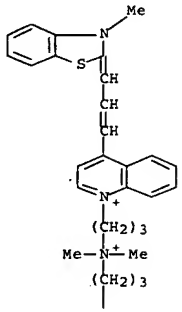
RN 157199-63-8 HCAPLUS
CN Quinolinium, 4-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propen-1-yl]-1-[3-(trimethylammonio)propyl]-, iodide (1:2) (CA INDEX NAME)



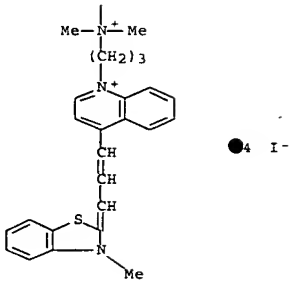
●2 I⁻

RN 166196-17-4 HCAPLUS
CN Quinolinium, 1,1'-[1,3-propanediylbis[(dimethyliminio)-3,1-propanediyl]]bis[4-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propen-1-yl]-, iodide (1:4) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



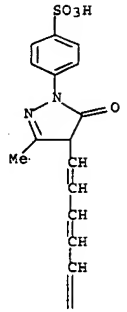
4 I-

RN 361437-94-7 HCAPLUS
CN Benzenesulfonic acid, 4-[4-[5-(1,3-dibutyltetrahydro-4,6-dioxo-2-thioxo-5(2H)-pyrimidinylidene)-1,3-pentadienyl]-4,5-dihydro-3-methyl-5-oxo-1H-pyrazol-1-yl]-, compd. with N,N-diethylethanamine (1:2) (9CI) (CA INDEX NAME)

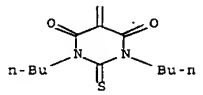
CM 1

CRN 361437-93-6
CMF C27 H32 N4 O6 S2

PAGE 1-A



PAGE 2-A

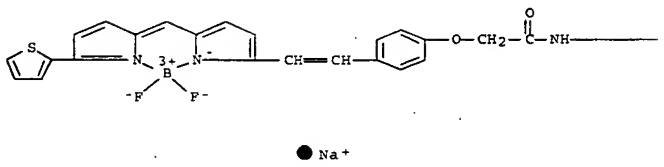


CM 2

CRN 121-44-8
CMF C6 H15 N

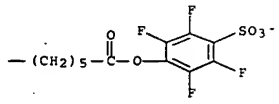
RN 361544-71-0 HCAPLUS
CN Borate(1-), difluoro[2,3,5,6-tetrafluoro-4-sulfophenyl 6-[[[4-[2-[5-[[5-(2-thienyl)-2H-pyrrol-2-ylidene-κN]methyl]-1H-pyrrol-2-yl-κN]ethenyl]phenoxy]acetyl]amino]hexanoato(2-)]-, sodium, (T-4)- (9CI) (CA INDEX NAME)

PAGE 1-A



Na+

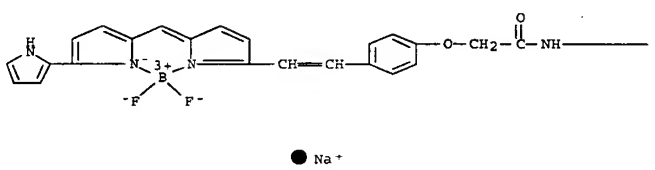
PAGE 1-B



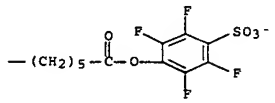
RN 361544-72-1 HCAPLUS
CN Borate(1-), difluoro[2,3,5,6-tetrafluoro-4-sulfophenyl

6-[[[4-[2-[2-[([2,2'-bi-1H-pyrrol]-5-yl-κN1)methylene]-2H-pyrrol-5-yl-κN]ethenyl]phenoxy]acetyl]amino]hexanoato(2-)]-, sodium, (T-4)- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L80 ANSWER 25 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:569726 HCAPLUS Full-text
DOCUMENT NUMBER: 135:149591
TITLE: Methods and compositions for rapid staining of nucleic acids in whole cells
INVENTOR(S): Deka, Chiranjit; Gordon, Kristie M.; Gupta, Ravinder; Horton, Allan
PATENT ASSIGNEE(S): Coulter International Corp., USA
SOURCE: U.S., 10 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6271035	B1	20010807	US 1998-175495	19981020
PRIORITY APPLN. INFO.:			US 1998-175495	19981020

AB A rapid fluorescence staining method for facilitating flow cytometry anal. of reticulocytes is described. The method comprises contacting cells with a cocktail containing a detergent, sphering agent, and a cell impermeable dye, such as TO-PRO-3, for about one minute. Advantageously, the inventors have found that the cocktail permits the dye to penetrate the cell membrane rapidly.

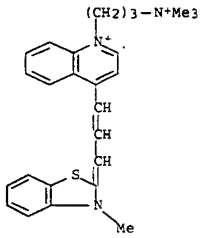
IC ICM G01N031-00

INCL 436010000
CC 9-4 (Biochemical Methods)
ST compn staining nucleic acid cell
IT Dyes
(Cell membrane impermeant; methods and compns. for rapid staining of nucleic acids in whole cells)
IT Cytometry
(flow; methods and compns. for rapid staining of nucleic acids in whole cells)
IT Staining, biological
(fluorescent; methods and compns. for rapid staining of nucleic acids in whole cells)
IT Biological transport
Blood analysis
Cell
Cell membrane
Composition
Detergents
Fluorescent dyes
Mixtures
Reticulocyte
Samples
Solutions
Spectroscopy
Spheres
Stains, biological
(methods and compns. for rapid staining of nucleic acids in whole cells)
IT DNA
Nucleic acids
RNA
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(methods and compns. for rapid staining of nucleic acids in whole cells)
IT Detergents
(nonionic; methods and compns. for rapid staining of nucleic acids in whole cells)
IT Laser radiation
(red; methods and compns. for rapid staining of nucleic acids in whole cells)
IT Detergents
(zwitterionic; methods and compns. for rapid staining of nucleic acids in whole cells)
IT 92-32-0, Pyronin Y. 1239-45-8, Ethidium bromide 25535-16-4, Propidium iodide 143413-84-7, TOTO-1 143413-85-8, YOYO-1 152068-09-2, YO-PRO-1 154757-99-0, POPO-3 157199-63-8, TO-PRO-3 161016-55-3, PO-PRO-3 166196-17-4, TOTO-3
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(methods and compns. for rapid staining of nucleic acids in whole cells)
IT 67-68-5, DMSO, biological studies 9002-93-1, Triton X-100 9036-19-5, Nonidet P-40 55965-84-9, Proclin 300 69227-93-6, Dodecyl-β-D-maltoside
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(methods and compns. for rapid staining of nucleic acids in whole cells)

IT 157199-63-8, TO-PRO-3 166196 17-4, TOTO-3
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(methods and compns. for rapid staining of nucleic acids in whole cells)

RN 157199-63-8 HCAPLUS

CN Quinolinium, 4-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propen-1-yl]-1-[3-(trimethylammonio)propyl]-, iodide (1:2) (CA INDEX NAME)

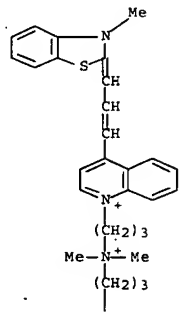


●2 I-

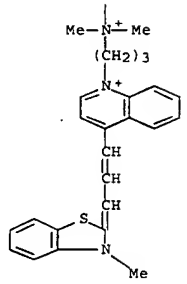
RN 166196-17-4 HCAPLUS

CN Quinolinium, 1,1'-[1,3-propanediylbis[(dimethyliminio)-3,1-propanediyl]]bis[4-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propen-1-yl]-, iodide (1:4) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



●4 I-

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 26 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:284081 HCAPLUS Full-text
DOCUMENT NUMBER: 134:307569
TITLE: Microfluidic devices and use of Nernstein voltage sensitive dyes in measuring transmembrane voltage
INVENTOR(S): Farinas, Javier Anibal; Wada, H. Garrett
PATENT ASSIGNEE(S): Caliper Technologies Corp., USA
SOURCE: PCT Int. Appl., 70 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001027253	A1	20010419	WO 2000-US27659	20001006
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2385618	A1	20010419	CA 2000-2385618	20001006
EP 1222257	A1	20020717	EP 2000-975224	20001006
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003511682	T	20030325	JP 2001-530458	20001006
US 6537771	B1	20030325	US 2000-684313	20001006
AU 783191	B2	20051006	AU 2001-13304	20001006
US 2004009545	A1	20040115	US 2003-349396	20030121
US 6759191	B2	20040706		

US 2004048239	A1	20040311	US 2003-655697		20030905
US 6979553	B2	20051227			
PRIORITY APPLN. INFO.:			US 1999-158323P	P	19991008
			US 1999-168792P	P	19991202
			US 2000-229951P	P	20000901
			US 2000-684313	A3	20001006
			WO 2000-US27659	W	20001006
			US 2003-349396	A1	20030121

AB Transmembrane potential measurement methods using cationic dyes, and anionic dyes are provided. Compns. of the cationic and anionic dyes and microfluidic systems which include the dyes and membranes are provided in conjunction with processing elements for transmembrane potential measurements. The time course of SYTO 62 (a cyclic-substituted unsym. cyanine dye) uptake by THP-1 cells depended on transmembrane potential. The changes in the cell transmembrane potential were detected in a microfluidic processor.

IC ICM C12N013-00
ICS C12Q001-02; G01N001-30; G01N015-06

CC 9-1 (Biochemical Methods)

IT Nucleic acids
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(cationic dye staining; microfluidic devices and use of Nernstein voltage sensitive dyes in measuring transmembrane voltage)

IT Animal cell
Animal tissue culture
Bacteria (Eubacteria)
Blood cell
Buffers
Cell differentiation
Cell membrane
Chloroplast
Containers
Electric potential
Flow
Fluorometry
Fungi
HeLa cell
Membrane, biological
Membrane potential
Membranes, nonbiological
Microtiter plates
Mitochondria
Plant cell
Plant tissue culture
Sensors
T cell (lymphocyte)
(microfluidic devices and use of Nernstein voltage sensitive dyes in measuring transmembrane voltage)

IT 335080-22-3, RGA 30
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(RGA 30; microfluidic devices and use of Nernstein voltage sensitive dyes in measuring transmembrane voltage)

IT 335080-22-3, RGA 30
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(RGA 30; microfluidic devices and use of Nernstein voltage sensitive dyes in measuring transmembrane voltage)

RN 335080-22-3 HCAPLUS

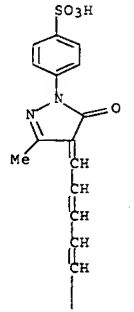
CN Benzenesulfonic acid, 4-[4-[5-(1,3-dibutylhexahydro-4,6-dioxo-2-thioxo-5-

pyrimidinyl)-2,4-pentadienylidene]-4,5-dihydro-3-methyl-5-oxo-1H-pyrazol-1-yl]-, compd. with N,N-diethylethanamine (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 118702-42-4
CMF C27 H32 N4 O6 S2

PAGE 1-A



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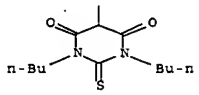

CM 2

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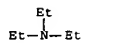
CMF C6 H15 N



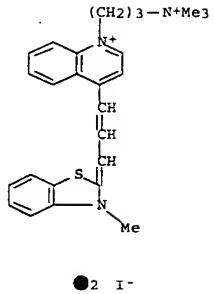
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 27 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:230342 HCAPLUS Full-text
DOCUMENT NUMBER: 135:207662
TITLE: Multiparameter flow cytometry of bacteria: Implications for diagnostics and therapeutics
AUTHOR(S): Shapiro, Howard M.
CORPORATE SOURCE: West Newton, MA, 02465-2513, USA
SOURCE: Cytometry (2001), 43(3), 223-226
CODEN: CYTODQ; ISSN: 0196-4763
PUBLISHER: Wiley-Liss, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Flow cytometric studies of antibiotic susceptibilities of bacteria have typically measured a single fluorescence parameter, such as membrane potential (indicating viability), or permeability to nucleic acid stains such as propidium (indicating nonviability). Cytometry of bacteria stained simultaneously with a membrane potential dye and a permeability indicator reveals unanticipated complexity. Aliquots of cultures of three bacterial species were stained with the potential-sensitive dye hexamethyl-indocarbocyanine [DiIC1(3)] and the permeability indicator TO-PRO-3, in the presence and absence of a proton ionophore which collapses the potential gradient. They were analyzed using a dual-laser flow cytometer. Cultures grown under suboptimal conditions appear to contain cells that take up TO-PRO-3 while maintaining membrane potential, although some events showing both high DiIC1(3) fluorescence and high TO-PRO-3 fluorescence may represent clumps. Variations in metabolic patterns between species and within organisms under suboptimal culture conditions or following antibiotic exposure may make it difficult to develop flow cytometric clin. assays for antibiotic susceptibility. However, transient permeabilization of otherwise resistant organisms by sublethal doses of antibiotics may make it possible to treat infections by such organisms with suitably derivatized, otherwise toxic mols.; multiparameter cytometry should be useful in pursuing this approach to therapy.

CC 9-5 (Biochemical Methods)
Section cross-reference(s): 1, 10
ST multiparameter flow cytometry bacteria diagnostic therapeutic
IT Membrane potential
(biol.; multiparameter flow cytometry of bacteria and implications for diagnostics and therapeutics)
IT Cytometry
(flow; multiparameter flow cytometry of bacteria and implications for diagnostics and therapeutics)
IT Staining, biological
(fluorescent; multiparameter flow cytometry of bacteria and implications for diagnostics and therapeutics)
IT Antibiotics
Bacteria (Eubacteria)
Diagnosis
Fluorescence
Fluorometry
Membrane, biological
Therapy
(multiparameter flow cytometry of bacteria and implications for diagnostics and therapeutics)
IT Biological transport
(permeation; multiparameter flow cytometry of bacteria and implications for diagnostics and therapeutics)
IT 555-60-2, cccp 25470-94-4 157199-63-8, TO-PRO-3
RL: BUU (Biological use, unclassified); BIOL (Biological

study); USES (Uses)
(multiparameter flow cytometry of bacteria and implications for diagnostics and therapeutics)
IT 157199-63-8, TO-PRO-3
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(multiparameter flow cytometry of bacteria and implications for diagnostics and therapeutics)
RN 157199-63-8 HCAPLUS
CN Quinolinium, 4-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propen-1-yl]-1-[3-(trimethylammonio)propyl]-, iodide (1:2) (CA INDEX NAME)



REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 28 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:168247 HCAPLUS Full-text
DOCUMENT NUMBER: 134:190341
TITLE: Method and device for counting cells in urine
INVENTOR(S): Gjelsnes, Oddbjorn; Ronning, Oystein
PATENT ASSIGNEE(S): Optoflow AS, Norway
SOURCE: PCT Int. Appl., 13 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001016595	A1	20010308	WO 2000-NO286	20000901

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,

CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
EP 1181553 A1 20020227 EP 2000-959042 20000901
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, MC, IE, SI, LT, LV, FI, RO
PRIORITY APPLN. INFO.: NO 1999-4228 A 19990901
WO 2000-NO286 W 20000901

AB The invention regards a method and a device for measuring the number of cells in urine. A fixative, a buffer and a dye are added to the urine sample, which is then analyzed in a device for measuring fluorescence.

IC ICM G01N033-493
ICS G01N033-50

CC 9-1 (Biochemical Methods)

ST device counting cell urine

IT Pumps
(Adjustable multichannel; method and device for counting cells in urine)

IT Cytometry
(apparatus, flow; method and device for counting cells in urine)

IT Measuring apparatus
(cytometers, flow; method and device for counting cells in urine)

IT Apparatus
Bacteria (Eubacteria)
Buffers
Carriers
Cell
Cell membrane
Cyanine dyes
Dyes
Fluorescent substances
Fluorometers
Fluorometry
Light scattering
Liquids
Mixers (processing apparatus)
Mixing
Pipes and Tubes
Spectrometers
Staining, biological
UV and visible spectroscopy
Urine analysis
(method and device for counting cells in urine)

IT Nucleic acids
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(method and device for counting cells in urine)

IT Biological transport
(permeation; method and device for counting cells in urine)

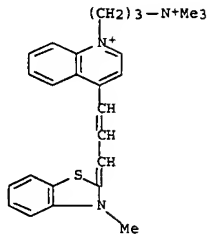
IT 60-00-4, EDTA, biological studies 64-17-5, Ethanol, biological studies 67-63-0, Isopropanol, biological studies 67-64-1, Acetone, biological studies 77-86-1, Tris buffer 11129-12-7, Borate 157199-63-8, TOPRO-3
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(method and device for counting cells in urine)

IT 157199-63-8, TOPRO-3
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(method and device for counting cells in urine)

RN 157199-63-8 HCAPLUS

CN Quinolinium, 4-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propen-1-yl]-1-[3-

(trimethylammonio)propyl]-, iodide (1:2) (CA INDEX NAME)



●2 I-

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 29 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2000:688089 HCAPLUS Full-text
DOCUMENT NUMBER: 133:247259
TITLE: Combination of antibiotic and nucleic acid-binding compound for killing bacteria, including antibiotic-resistant bacteria
INVENTOR(S): Shapiro, Howard M.
PATENT ASSIGNEE(S): USA
SOURCE: PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000056333	A1	20000928	WO 2000-US7500	20000321
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6562785	B1	20030513	US 1999-274699	19990323
CA 2367149	A1	20000928	CA 2000-2367149	20000321
EP 1165073	A1	20020102	EP 2000-918218	20000321
EP 1165073	B1	20060531		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY				
JP 2002539259	T	20021119	JP 2000-606238	20000321
AU 761609	B2	20030605	AU 2000-39068	20000321

AT 327754 T 20060615 AT 2000-918218 20000321
PRIORITY APPLN. INFO.: US 1999-274699 A 19990323
WO 2000-US7500 W 20000321

AB Methods are provided for killing bacteria, including antibiotic-resistant bacteria, by contacting the bacteria with a membrane permeabilizing compound or combination of compds. and a membrane impermeant toxic agent or combination of agents, resulting in the death of the bacteria without substantial injury to the infected host or patient. The invention is also provides related compns. and kits. Further provided are methods of rendering toxic agents, e.g. toxic organic mols., membrane impermeant for use in the methods and compns.

IC ICM A61K031-43
ICS A61P031-00; A61P033-00

CC 1-5 (Pharmacology)
Section cross-reference(s): 63

ST antibiotic nucleic acid binder bactericide; resistance antibiotic nucleic acid binder bactericide

IT Membrane potential
(biol.; combination of antibiotic and nucleic acid-binding compound for killing bacteria, including antibiotic-resistant bacteria)

IT Antibacterial agents
Antibiotic resistance
Antibiotics
Antimicrobial agents
Cyanine dyes
Drug delivery systems
Drug screening
Fungicides
Micrococcus luteus
Staphylococcus aureus
(combination of antibiotic and nucleic acid-binding compound for killing bacteria, including antibiotic-resistant bacteria)

IT Nucleic acids
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(combination of antibiotic and nucleic acid-binding compound for killing bacteria, including antibiotic-resistant bacteria)

IT Membrane, biological
(membrane-permeabilizing compds.; combination of antibiotic and nucleic acid-binding compound for killing bacteria, including antibiotic-resistant bacteria)

IT Biological transport
(permeation; combination of antibiotic and nucleic acid-binding compound for killing bacteria, including antibiotic-resistant bacteria)

IT Cell wall
(synthesis, inhibitors; combination of antibiotic and nucleic acid-binding compound for killing bacteria, including antibiotic-resistant bacteria)

IT Lactams
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(β-, antibiotics; combination of antibiotic and nucleic acid-binding compound for killing bacteria, including antibiotic-resistant bacteria)

IT Lactams
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(β-, monocyclic; combination of antibiotic and nucleic acid-binding compound for killing bacteria, including antibiotic-resistant bacteria)

IT Antibiotics
(β-lactam; combination of antibiotic and nucleic acid-binding compound for killing bacteria, including antibiotic-resistant bacteria)

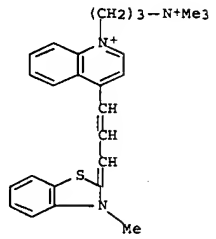
IT 260-94-6D, Acridine, derivs.
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(and thiazines; combination of antibiotic and nucleic acid-binding compound for killing bacteria, including antibiotic-resistant bacteria)

IT 56-75-7, Chloramphenicol 57-92-1, Streptomycin, biological studies 60-54-8, Tetracycline 68-41-7, Cycloserine 114-07-8, Erythromycin 1404-90-6, Vancomycin 1405-87-4, Bacitracin 11111-12-9D, Cephalosporin, derivs. 23686-76-2D, Phenanthridinium, compds. 26787-78-0, Amoxicillin 157199-63-8, TO-PRO-3
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(combination of antibiotic and nucleic acid-binding compound for killing bacteria, including antibiotic-resistant bacteria)

IT 157199-63-8, TO-PRO-3
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(combination of antibiotic and nucleic acid-binding compound for killing bacteria, including antibiotic-resistant bacteria)

RN 157199-63-8 HCAPLUS

CN Quinolinium, 4-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propen-1-yl]-1-[3-(trimethylammonio)propyl]-, iodide (1:2) (CA INDEX NAME)



●2 I-

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 30 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2000:553732 HCAPLUS Full-text

DOCUMENT NUMBER: 133:145894
TITLE: Detection of nucleic acid sequences by amplification as RNA using DNA-dependent RNA polymerase
INVENTOR(S): Biebricher, Christof K.; Luce, Rudiger; Berendes, Frank; Kesseler, Maria; Kalkus, Jutta; Gellersen, Katja; Gottschalk, Gerhard
PATENT ASSIGNEE(S): Max-Planck-Gesellschaft zur Forderung der Wissenschaften e.V., Germany; Clavigen G.m.b.H.
SOURCE: PCT Int. Appl., 62 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

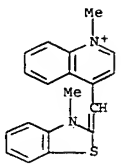
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000046400	A1	20000810	WO 2000-EP875	20000203
W: CA, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 19904285	A1	20000810	DE 1999-19904285	19990203
EP 1147221	A1	20011024	EP 2000-905016	20000203
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRIORITY APPLN. INFO.: DE 1999-19904285 A 19990203
WO 2000-EP875 W 20000203

AB A method for the qual. or quant. detection of a nucleic acid analyte in a sample by amplification as an RNA using a DNA-dependent RNA polymerase and a probe containing a suitable start site is described. The probe contains a sequence specific to the target sequence and a region that the polymerase uses to start RNA formation from. According to said method the analyte is detected by amplification of the RNA replicon using a DNA-dependent RNA polymerase and subsequent detection of the amplification products. The invention also relates to a nucleic acid which codes for an anal. reagent provided for in the invention and to a test kit for carrying out the above method. The kit also uses a capture probe that can be used to immobilize the target sequence and define and end-point for the amplification product.

IC ICM C12Q001-68
ICS C12P019-34
CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 9
IT Bacteriophage SP6
Coliphage T7
Enterobacteria phage T3
(sequence amplification using replication elements of; detection of nucleic acid sequences by amplification as RNA using DNA-dependent RNA polymerase)
IT 65-61-2, Acridine orange 1239-45-8, Ethidium bromide 24147-36-2, Thiazole orange 25535-16-4, Propidium iodide 152068-09-2, YoPro 1 157199-59-2, ToPro 1
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(as reporter dye; detection of nucleic acid sequences by amplification as RNA using DNA-dependent RNA polymerase)
IT 24147-36-2, Thiazole orange
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(as reporter dye; detection of nucleic acid sequences by amplification as RNA using DNA-dependent RNA polymerase)

RN 24147-36-2 HCAPLUS
CN Quinolinium, 1-methyl-4-[(3-methyl-2(3H)-benzothiazolylidene)methyl]-, iodide (1:1) (CA INDEX NAME)



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REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

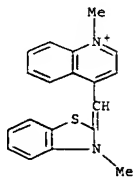
L80 ANSWER 31 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2000:376371 HCAPLUS Full-text
DOCUMENT NUMBER: 134:3090
TITLE: In vivo biotinylation studies: specificity of labelling of reticulated platelets by thiazole orange and mepacrine
AUTHOR(S): Robinson, Monique; Machin, Samuel; Mackie, Ian; Harrison, Paul
CORPORATE SOURCE: Department of Haematology, University College Hospital, London, WC1E 6HX, UK
SOURCE: British Journal of Haematology (2000), 108(4), 859-864
CODEN: BJHEAL; ISSN: 0007-1048
PUBLISHER: Blackwell Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Animal in vivo biotinylation studies have demonstrated that thiazole orange (TO) labels the youngest cells in the circulation. TO has since been widely used for the measurement of reticulated platelets. As recent findings suggest that at high concns. TO also labels platelet dense granules non-specifically, the value of previous work is unclear. Mepacrine also labels platelet dense granules and can detect storage pool defects. In this study, a mouse in vivo biotinylation model was used to determine the specificity of TO and mepacrine staining on platelets recently released into the circulation. The mean life span of biotin/TO (low), biotin/TO (high) and mepacrine/TO dual-pos. platelets was 1.4 d (SD 0.5), 2.2 d (SD 0.2) and 2.3 d (SD 0.3) resp. (n = 6) compared with a life span for biotin-pos. platelets of 4.9 d (SD 1.6). TO (low), TO (high) and mepacrine labeled 8.0% (SD 3.1), 43.9% (SD 8.3) and 40.0% (SD 9.9) of the total platelet population resp. (results of 30 samples from six mice), which decreased to 6.8% (SD 3.9), 26.6% (SD 6.9) and 25.7% (SD 10.6) after thrombin degranulation. The shorter life span and lack of thrombin sensitivity of TO (low)-pos. platelets, suggests that TO (low) measures reticulated platelets specifically. The comparative life spans and thrombin sensitivity of TO (high) and mepacrine-pos. platelets suggest that TO (high) labels platelet dense granules. These data also suggest that dense granules are lost during platelet ageing.

CC 13-5 (Mammalian Biochemistry)
Section cross-reference(s): 6, 9
ST platelet reticulated circulation biotin thiazole orange mepacrine staining
IT Biotinylation
Circulation
Fluorescence
Staining, biological
(in vivo biotinylation studies and specificity of labeling of reticulated platelets by thiazole orange and mepacrine)
IT 58-85-5, Biotin 83-89-6, Mepacrine 107091-89-4, Thiazole orange
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(in vivo biotinylation studies and specificity of labeling of reticulated platelets by thiazole orange and mepacrine)
IT 107091-89-4, Thiazole orange
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(in vivo biotinylation studies and specificity of labeling of reticulated platelets by thiazole orange and mepacrine)
RN 107091-89-4 HCAPLUS
CN Quinolinium, 1-methyl-4-[(3-methyl-2(3H)-benzothiazolylidene)methyl]-, 4-methylbenzenesulfonate (1:1) (CA INDEX NAME)

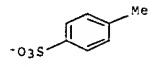
CM 1

CRN 24144-08-9
CMF C19 H17 N2 S



CM 2

CRN 16722-51-3
CMF C7 H7 O3 S



REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 32 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2000:367108 HCAPLUS Full-text
DOCUMENT NUMBER: 133:14302
TITLE: Erythroblast diagnostic flow-cytometry method and reagents
INVENTOR(S): Tsuji, Tomohiro; Sakata, Takashi; Ikeuchi, Yoshiro; Oguni, Shin'ichiro
PATENT ASSIGNEE(S): Sysmex Corporation, Japan
SOURCE: Eur. Pat. Appl., 39 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1004880	A2	20000531	EP 1998-310004	19981207
EP 1004880	A3	20030205		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2000162209	A	20000616	JP 1998-336916	19981127
JP 3886271	B2	20070228		
US 6664110	B1	20031216	US 1998-207995	19981209
PRIORITY APPLN. INFO.:			JP 1998-336916 A	19981127
OTHER SOURCE(S):	MARPAT 133:14302			

AB Reagents and a method for simple and rapid discrimination and counting of erythroblasts in peripheral blood or circulatory system-related samples accurately with high precision is disclosed. The reagents include a hemolytic agent for dissolving erythrocytes in a body fluid sample and for conditioning leukocytes and erythroblasts in the sample to be suitable for staining, and including at least one fluorescent dye selected to stain leukocytes and erythroblasts differentially. When the selected fluorescent dye is mixed with the sample, a detectable difference in fluorescence intensity at least between leukocytes and erythroblasts arises under laser illumination in flow cytometric anal. The reagents further include surfactant added to the hemolytic agent, selected to enable flow cytometric discrimination of erythroblasts in the body fluid sample by their maturation stages.

IC ICM G01N033-50
ICS G01N033-58; G01N033-52
CC 9-5 (Biochemical Methods)
Section cross-reference(s): 14
IT Alkyl groups
Amino group
Anions
Blood analysis
Body fluid
Bone marrow
Circulation
Diagnosis
Dissolution
Erythroblast
Erythrocyte
Fluorescent dyes
Fluorometry
Hemolysis

Laser radiation
Leukocyte
Staining, biological
Surfactants
Urine analysis
pH
(erythroblast diagnostic flow-cytometry method and reagents)

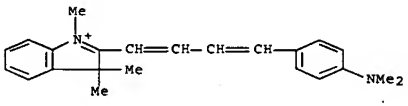
IT 54-21-7, Sodium salicylate 69-72-7, biological studies 88-99-3, Phthalic acid, biological studies 569-64-2, Malachite green 633-03-4, Brilliant green 3028-99-7, Nk-376 3625-57-8, Nile blue a 4727-50-8, Cryptocyanine 18359-88-1, Nk-382 20517-94-6, Nk-1836 20591-23-5, Nk-138 31835-06-0, Sucrose monocaprate 33231-00-4, Iodine green 62669-60-7, Oxazine 720 63561-41-1, LD 700 67556-77-8, Oxazine 750 75621-03-3, Chaps 76433-27-7, Lds730 82473-24-3, Chapso 85316-98-9, Mega-8 85618-20-8 85618-21-9 86303-23-3, Deoxy-bigchap 89872-07-1, Nk-2711 105893-63-8, Nk 2825 148565-55-3 178742-72-8, Nk-1954
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(erythroblast diagnostic flow-cytometry method and reagents)

IT 76433-27-7, Lds730
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(erythroblast diagnostic flow-cytometry method and reagents)

RN 76433-27-7 HCAPLUS
CN 3H-Indolium, 2-[4-[4-(dimethylamino)phenyl]-1,3-butadienyl]-1,3,3-trimethyl-, perchlorate (9CI) (CA INDEX NAME)

CM 1

CRN 76433-26-6
CMF C23 H27 N2



CM 2

CRN 14797-73-0
CMF Cl O4

L80 ANSWER 33 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:746280 HCAPLUS Full-text
DOCUMENT NUMBER: 132:262246
TITLE: Fluorescence enhancement of DNA-bound TO-PRO-3 by incorporation of bromodeoxyuridine to monitor cell cycle kinetics
AUTHOR(S): Beisker, Wolfgang; Weller-Mewe, Eva Maria; Nusse, Michael
CORPORATE SOURCE: Flow Cytometry Group, GSF-National Research Center for Environment and Health, Neuherberg, 85764, Germany
SOURCE: Cytometry (1999), 37(3), 221-229
CODEN: CYTODQ; ISSN: 0196-4763
PUBLISHER: Wiley-Liss, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Background: The detection of DNA-incorporated bromodeoxyuridine (BrdUrd) in mammalian cells is a well-known and important technique to study cell cycle. The use of TO-PRO-3 for detection of BrdUrd substitution of DNA by dual-laser flow cytometry has been investigated. Methods: Fluorescence enhancement of TO-PRO-3 in BrdUrd-labeled cells is registered in combination with the fluorescence emission of the intercalating dye propidium iodide (PI) as a total DNA stain to give bivariate DNA/BrdUrd histograms. By the low concentration of only 0.3 μM TO-PRO-3, BrdUrd detection is optimized, and undisturbed total DNA content by PI can be detected as well. TO-PRO-3 is excited by a red HeNe laser and PI by an argon ion laser. Results: In order to understand the binding of TO-PRO-3, energy transfer from PI to TO-PRO-3 has been measured as well as the influence of an external DNA binding dye such as Hoechst 33258 with Adenine-Thymine (AT) binding specificity. Cell cycle studies of human SCL-2 keratinocytes and mouse 3T3 cells prove the method to be as generally applicable as the classical BrdUrd/Hoechst quenching technique, but without need for expensive UV laser excitation. No BrdUrd sensitivity could be found for the similar dyes TO-PRO-1 and YO-PRO-3, whereas TO-PRO-5 and YOYO-3 showed only very little sensitivity to BrdUrd labeling as compared with TO-PRO-3. Conclusions: Cell cycle studies of mammalian cells can be done by dual-laser flow cytometry without the need for UV lasers by using the BrdUrd-dependent fluorescence enhancement of TO-PRO-3. Total DNA content can be measured simultaneously using PI.

CC 9-5 (Biochemical Methods)
Section cross-reference(s): 3, 6, 13

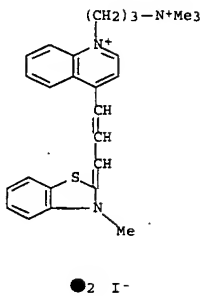
ST DNA fluorescence bromodeoxyuridine stain TO PRO 3 cell cycle

IT Stains, biological
(fluorescent; fluorescence enhancement of DNA-bound TO-PRO-3 by incorporation of bromodeoxyuridine to monitor cell cycle kinetics)

IT 59-14-3, Bromodeoxyuridine 23491-45-4, Hoechst 33258 25535-16-4, Propidium iodide 156312-20-8, YOYO-3 157199-59-2, TO-PRO-1 157199-62-7, YO-PRO-3 157199-63-8, TO-PRO-3 177027-61-1, TO-PRO-5
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(fluorescence enhancement of DNA-bound TO-PRO-3 by incorporation of bromodeoxyuridine to monitor cell cycle kinetics)

IT 157199-63-8, TO-PRO-3
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(fluorescence enhancement of DNA-bound TO-PRO-3 by incorporation of bromodeoxyuridine to monitor cell cycle kinetics)

RN 157199-63-8 HCAPLUS
CN Quinolinium, 4-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propen-1-yl]-1-[3-(trimethylammonio)propyl]-, iodide (1:2) (CA INDEX NAME)

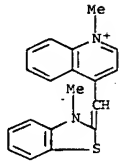


●2 I⁻

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 34 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:504844 HCAPLUS Full-text
DOCUMENT NUMBER: 131:282109
TITLE: Bacterial fingerprinting by flow cytometry: Bacterial species discrimination
AUTHOR(S): Kim, Yongseong; Jett, James H.; Larson, Erica J.; Penttila, Janetta R.; Marrone, Babetta L.; Keller, Richard A.
CORPORATE SOURCE: Chemical Science and Technology Division, Los Alamos National Laboratory, Los Alamos, NM, 87545, USA
SOURCE: Cytometry (1999), 36(4), 324-332
CODEN: CYTODQ; ISSN: 0196-4763
PUBLISHER: Wiley-Liss, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Background: A flow cytometric measurement (FCM) technique has been developed to size DNA fragments. Individual fragments of a restriction digest of genomic DNA, stained with an intercalating dye, are passed through an ultrasensitive cytometer. The measured fluorescence intensity from each fragment is proportional to the fragment length. Methods: The isolation of bacterial genomic DNA and digestion by restriction enzymes were performed inside an agarose plug. Rare cutting enzymes were employed to produce a manageable number of DNA fragments. Electroelution was used to move the DNA fragments from the agarose plug into a solution containing polyamines to protect the DNA from shear-induced breakage. The DNA was stained with the bisintercalating dye thiazole orange homodimer and introduced into our ultrasensitive flow cytometer. A histogram of the fluorescence intensities (fingerprint) was constructed. Results: Gram-pos. Bacillus globigii and Gram-neg. bacteria Escherichia coli and Erwinia herbicola were distinguished by the fingerprint pattern of restriction fragments of their genomic DNA. DNA sizes determined by FCM are in good agreement with pulsed-field gel electrophoresis (PFGE) anal. Flow cytometry requires only picogram quantities of purified DNA

and takes less than 10 min for data collection and anal. When the total sample preparation time is included, the anal. times for PFGE and FCM are similar (≈3 days). Conclusions: FCM is an attractive technique for the identification of bacterial species. It is more sensitive and potentially much faster than PFGE.
CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 10
ST bacteria species detn fingerprinting flow cytometry
IT Bacillus subtilis
DNA fingerprinting
Escherichia coli
Gram-negative bacteria
Gram-positive bacteria (Firmicutes)
Pantoea agglomerans
RFLP (restriction fragment length polymorphism)
(bacterial fingerprinting by flow cytometry relating bacterial species discrimination)
IT Cytometry
(flow; bacterial fingerprinting by flow cytometry relating bacterial species discrimination)
IT 24147-36-2, Thiazole orange
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(bacterial fingerprinting by flow cytometry relating bacterial species discrimination)
IT 24147-36-2, Thiazole orange
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(bacterial fingerprinting by flow cytometry relating bacterial species discrimination)
RN 24147-36-2 HCAPLUS
CN Quinolinium, 1-methyl-4-[(3-methyl-2(3H)-benzothiazolylidene)methyl]-, iodide (1:1) (CA INDEX NAME)



●I⁻

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 35 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1998:602033 HCAPLUS Full-text
DOCUMENT NUMBER: 129:313077

TITLE: Nucleic acid (DNA, RNA) quantification and RNA/DNA ratio determination in marine sediments: comparison of spectrophotometric, fluorometric, and high-performance liquid chromatography methods and estimation of detrital DNA

AUTHOR(S): Dell'anno, A.; Fabiano, M.; Duineveld, G. C. A.; Kok, A.; Danovaro, R.

CORPORATE SOURCE: Faculty of Science, Marine Science, University of Ancona, Ancona, 60131, Italy

SOURCE: Applied and Environmental Microbiology (1998), 64(9), 3238-3245
CODEN: AEMIDF; ISSN: 0099-2240

PUBLISHER: American Society for Microbiology

DOCUMENT TYPE: Journal

LANGUAGE: English

AB In this study, we compared three methods for extraction and quantification of RNA and DNA from marine sediments: (i) a spectrophotometric method using the diphenylamine assay; (ii) a fluorometric method utilizing selective fluorochromes (thiazole orange for total nucleic acids and Hoechst 33258 for DNA); and (iii) a high-pressure liquid chromatog. (HPLC) method which uses a specific column to sep. RNA and DNA and UV absorption of the nucleic acids for quantification. Sediment samples were collected in the oligotrophic Cretan Sea (eastern Mediterranean, from 40 to 1,540 m in depth) and compared to the distribution and composition of the benthic microbial assemblages (i.e., bacteria and microprotozoa). DNA concns. measured spectrophotometrically and by HPLC were not significantly different, while fluorometric yields were significantly lower. Such differences appear mainly due to fact that the stain-DNA complex is strongly dependent on the DNA composition and structure. RNA concns. determined by the three methods displayed some differences; fluorometric and spectrophotometric methods obtain RNA concentration by difference and therefore may be biased by DNA ests. By contrast, the HPLC method provides independent assessments of RNA and DNA concns. We tentatively estimated the contribution of the detrital DNA to the total DNA pools in two ways. The two calcns. provided quite similar results indicating that the majority of the DNA pool in the deep-sea sediments was detrital. Microbial RNA generally accounted for almost the entire sedimentary RNA pools below 100-m depth. RNA concns. were found to decrease along the Cretan shelf and slope. The RNA/DNA ratio calculated by using fluorometric DNA concns. was significantly correlated with values of sediment community oxygen consumption only below 100-m depth (dominated by the microbial biomass). These data suggest that the RNA/DNA ratio, based on fluorometric ests. of DNA, can be used as an indicator of benthic metabolic activity, but only when metazoan contribution to the microbial DNA is negligible.

CC 9-16 (Biochemical Methods)
Section cross-reference(s): 61

IT 107091-89-4, Thiazole orange
RL: ANT (Analyte); ANST (Analytical study)
(nucleic acid (DNA, RNA) quantification and RNA/DNA ratio determination in marine sediments: comparison of spectrophotometric, fluorometric, and high-performance liquid chromatog. methods and estimation of detrital DNA)

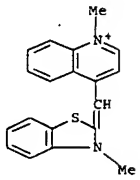
IT 107091-89-4, Thiazole orange
RL: ANT (Analyte); ANST (Analytical study)
(nucleic acid (DNA, RNA) quantification and RNA/DNA ratio determination in marine sediments: comparison of spectrophotometric, fluorometric, and high-performance liquid chromatog. methods and estimation of detrital DNA)

RN 107091-89-4 HCAPLUS

CN Quinolinium, 1-methyl-4-[(3-methyl-2(3H)-benzothiazolylidene)methyl]-, 4-methylbenzenesulfonate (1:1) (CA INDEX NAME)

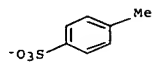
CM 1

CRN 24144-08-9
CMF C19 H17 N2 S



CM 2

CRN 16722-51-3
CMF C7 H7 O3 S



REFERENCE COUNT: 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 36 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:365015 HCAPLUS Full-text

DOCUMENT NUMBER: 129:38386

TITLE: Method for classifying and counting immature leukocytes using cell hemolysis, staining and flow cytometry

INVENTOR(S): Sakata, Takashi; Mizukami, Toshihiro; Hatanaka, Kayo

PATENT ASSIGNEE(S): Toa Medical Electronics Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 14 pp.
CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 844481	A1	19980527	EP 1997-120368	19971120
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 10206423	A	19980807	JP 1997-289619	19971022
US 5958776	A	19990928	US 1997-972103	19971117
CN 1183559	A	19980603	CN 1997-123137	19971119

PRIORITY APPLN. INFO.: JP 1996-309492 A 19961120

JP 1997-289619 A 19971022

OTHER SOURCE(S): MARPAT 129:38386

AB A flow cytometry method is described for classifying and counting immature leukocytes. The method consists of (1) treating a hematol. sample with a hemolytic agent which maintains immature leukocytes in a viable state and damages other leukocytes, (2) staining the damaged leukocytes with a fluorochrome which can stain damaged cells, and (3) measuring at least one kind of scattered light and at least one kind of fluorescence of the blood cells treated in the preceding step to classify and count leukocytes based on the intensities of the scattered light and the fluorescence. The hemolytic agent contains the following components (1) a polyoxyethylene series nonionic surface active agent for fixing the cytoplasm and cell membrane of immature leukocytes, (2)a solubilizer for damaging the cell membrane of blood cells and shrinking the cells, (3) an amino acid for fixing the cytoplasm and cell membrane of immature leukocytes, and (4) a buffer for making the pH of the resulting solution 5.0 to 9.0 and its osmotic pressure 150 to 600 mOsm/kg. This method can measure immature leukocytes highly precisely, and simultaneously perform the classification of normal leukocytes and the counting of leukocytes.

IC ICM G01N033-50
ICS G01N001-30; G01N033-52

CC 9-5 (Biochemical Methods)
Section cross-reference(s): 13

IT Cytometry
(flow; method for classifying and counting immature leukocytes using cell hemolysis, staining and flow cytometry)

IT Staining, biological
Stains, biological
(fluorescent; method for classifying and counting immature leukocytes using cell hemolysis, staining and flow cytometry)

IT Leukocyte
(immature; method for classifying and counting immature leukocytes using cell hemolysis, staining and flow cytometry)

IT Blood analysis
Buffers
Fluorometry
Hemolysis
Laser radiation scattering
Solubilizers
(method for classifying and counting immature leukocytes using cell hemolysis, staining and flow cytometry)

IT Amino acids, analysis
RL: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(method for classifying and counting immature leukocytes using cell hemolysis, staining and flow cytometry)

IT Polyoxyalkylenes, analysis
RL: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(nonionic surface active agent; method for classifying and counting immature leukocytes using cell hemolysis, staining and flow cytometry)

IT Surfactants
(nonionic, polyoxyethylene; method for classifying and counting immature leukocytes using cell hemolysis, staining and flow cytometry)

IT 65282-36-2, Ethidium diazide chloride
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST

(Analytical study); BIOL (Biological study); USES (Uses)
(ethidium diazide chloride; method for classifying and counting immature leukocytes using cell hemolysis, staining and flow cytometry)

IT 61926-22-5, Ethidium homodimer 1
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(ethidium homodimer-1; method for classifying and counting immature leukocytes using cell hemolysis, staining and flow cytometry)

IT 180389-01-9, Ethidium homodimer 2
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(ethidium homodimer-2; method for classifying and counting immature leukocytes using cell hemolysis, staining and flow cytometry)

IT 1239-45-8, Ethidium bromide 25535-16-4, Propidium iodide 58880-05-0, Ethidium monoazide 68942-32-5, Ethidium-acridine heterodimer 143413-84-7, TOTO-1 157199-59-2, TO-PRO-1 157199-63-8, TO-PRO-3 166196-17-4, TOTO-3
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(method for classifying and counting immature leukocytes using cell hemolysis, staining and flow cytometry)

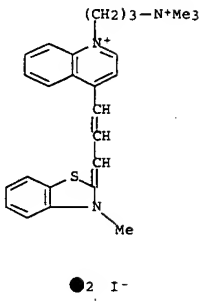
IT 59-51-8, Methionine 137-16-6, N-Lauroylsarcosine sodium salt 7365-45-9, HEPES 9004-98-2, Polyoxyethylene oleylether 25322-68-3D, nonionic surface active agent 189148-50-3
RL: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(method for classifying and counting immature leukocytes using cell hemolysis, staining and flow cytometry)

IT 143011-72-7, Granulocyte colony-stimulating factor
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(method for classifying and counting immature leukocytes using cell hemolysis, staining and flow cytometry)

IT 157199-63-8, TO-PRO-3 166196-17-4, TOTO-3
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(method for classifying and counting immature leukocytes using cell hemolysis, staining and flow cytometry)

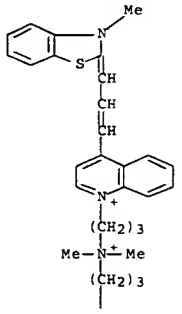
RN 157199-63-8 HCAPLUS

CN Quinolinium, 4-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propen-1-yl]-1-[3-(trimethylammonio)propyl]-, iodide (1:2) (CA INDEX NAME)

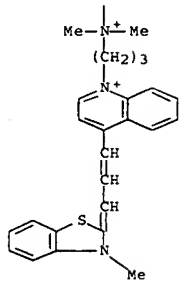


RN 166196-17-4 HCAPLUS
CN Quinolinium, 1,1'-[1,3-propanediylbis[(dimethyliminio)-3,1-propanediyl]]bis[4-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propen-1-yl]-, iodide (1:4) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



IT 189148-50-3
RL: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(method for classifying and counting immature leukocytes using cell hemolysis, staining and flow cytometry)
RN 189148-50-3 HCAPLUS
CN Quinolinium, 1-(2-hydroxyethyl)-4-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propenyl]-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 189148-49-0
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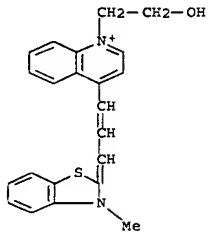
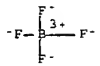


CM 2

CRN 14874-70-5
CMF B F4
CCI CCS



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L80 ANSWER 37 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1996:577653 HCAPLUS Full-text
DOCUMENT NUMBER: 125:216358
TITLE: Spectroscopically detectable nucleic acid ligands
INVENTOR(S): Pitner, James B.; Malinowski, Douglas P.; Vonk, Glenn P.; Gold, Larry
PATENT ASSIGNEE(S): Nexstar Pharmaceuticals, Inc., USA; Becton Dickinson and Company
SOURCE: PCT Int. Appl., 36 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 129
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9622383	A1	19960725	WO 1995-US9237	19950721
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5641629	A	19970624	US 1995-376329	19950120
AU 9531401	A	19960807	AU 1995-31401	19950721
EP 805870	A1	19971112	EP 1995-927346	19950721
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE				
JP 10512751	T	19981208	JP 1995-522232	19950721
AU 773741	B2	20040603	AU 2001-18257	20010202
AU 773815	B2	20040610	AU 2001-29834	20010323
AU 2004206993	A1	20040930	AU 2004-206993	20040901
AU 2004206993	B2	20070222		
AU 2004210606	A1	20041007	AU 2004-210606	20040910
AU 2004242462	A1	20050127	AU 2004-242462	20041223
AU 2004242532	A1	20050127	AU 2004-242532	20041224
PRIORITY APPLN. INFO.:			US 1995-376329	A 19950120
			US 1990-536428	B2 19900611
			AU 1991-82061	A0 19910610
			US 1991-714131	A3 19910610
			US 1992-931473	A2 19920817
			US 1993-134028	B1 19931007
			US 1994-234997	A2 19940428
			US 1994-276271	A2 19940718
			US 1995-443957	A2 19950518
			WO 1995-US9237	W 19950721
			AU 1996-58839	A3 19960530

AU 1996-61611	A3	19960604
AU 2000-62349	A3	20000724
AU 2000-67487	A3	20000726
AU 2001-18257	A	20010202
AU 2001-29834	A3	20010323

AB The present invention relates to methods of using spectroscopically detectable labeled receptor mols. to determine the presence or absence of a target compound in a sample. The spectroscopic technique may be fluorescence polarization or fluorescence anisotropy. In one embodiment, spectroscopically detectable nucleic acid ligands labeled with fluorescein or thiazole orange are used to determine the presence or absence of biol. targets of interest (e.g., thrombin, elastase, growth factors, chorionic gonadotropin, bacteria, viruses, etc.) in biol. samples (e.g., blood).

IC ICM C12P019-34
ICS C12Q001-68

CC 9-5 (Biochemical Methods)
Section cross-reference(s): 2, 3, 80

IT Animal cell
Bacteria
Blood analysis
Virus
(spectroscopically detectable nucleic acid ligands as receptors in biochem. anal.)

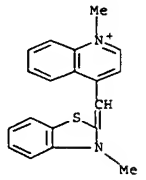
IT 2321-07-5DP, nucleic acid conjugates 107091-89-4DP, Thiazole orange, nucleic acid conjugates 145563-68-4DP, fluorescein derivs. 146159-59-3DP, fluorescein derivs. 169669-13-0DP, fluorescein derivs. 181380-40-5DP, fluorescein derivs. 181593-35-1P 181593-36-2DP, fluorescein derivs.
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(spectroscopically detectable nucleic acid ligands as receptors in biochem. anal.)

IT 107091-89-4DP, Thiazole orange, nucleic acid conjugates
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(spectroscopically detectable nucleic acid ligands as receptors in biochem. anal.)

RN 107091-89-4 HCAPLUS
CN Quinolinium, 1-methyl-4-[(3-methyl-2(3H)-benzothiazolylidene)methyl]-, 4-methylbenzenesulfonate (1:1) (CA INDEX NAME)

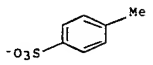
CM 1

CRN 24144-08-9
CMF C19 H17 N2 S



CM 2

CRN 16722-51-3
CMF C7 H7 O3 S



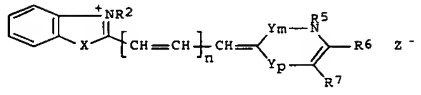
L80 ANSWER 38 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1996:506433 HCAPLUS Full-text
DOCUMENT NUMBER: 125:162751
TITLE: Fluorescent viability assay using cyclic-substituted unsymmetrical cyanine dyes
INVENTOR(S): Millard, Paul J.; Roth, Bruce L.; Yue, Stephen T.; Haugland, Richard P.
PATENT ASSIGNEE(S): Molecular Probes, Inc., USA
SOURCE: U.S., 26 pp., Cont. of U. S. 5,436,134.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 8
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5534416	A	19960709	US 1993-148847	19931108
US 5436134	A	19950725	US 1993-90890	19930712
US 5545535	A	19960813	US 1993-146328	19931101
CA 2133765	A1	19941027	CA 1994-2133765	19940413
CA 2133765	C	19991109		
EP 675924	A1	19951011	EP 1994-914173	19940413
EP 675924	B1	20011212		
R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL				
AT 210703	T	20011215	AT 1994-914173	19940413
ES 2166777	T3	20020501	ES 1994-914173	19940413
JP 07196930	A	19950801	JP 1994-159824	19940712
JP 2005272479	A	20051006	JP 2005-167583	20050607
JP 2005344121	A	20051215	JP 2005-167584	20050607
JP 2006111884	A	20060427	JP 2005-306416	20051020

PRIORITY APPLN. INFO.:

US 1993-47683	B2	19930413
US 1993-90890	A1	19930712
US 1993-146328	A2	19931101
US 1993-148847	A	19931108
WO 1994-US4127	W	19940413
JP 1994-159824	A3	19940712

OTHER SOURCE(S): MARPAT 125:162751
GI

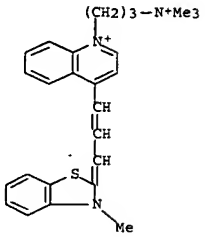


I

AB The invention relates to a method of analyzing the viability of a sample of cells using an aqueous solution comprising two fluorescent dyes. Dye I has the formula I where R2 is C1-6 alkyl; Z- is a biol. compatible counterion; X is O, S, Se, or NR15, where R15 is H or C1-6 alkyl; or CR16R17, where R16 and R17, which may be the same or different, are independently H or C1-6 alkyl, or the carbons of R16 and R17 taken in combination complete a 5- or 6-membered saturated ring; and the benzazolium is optionally further substituted; n = 0, 1, or 2; Y is CR3:CR4; p and m = 0 or 1, such that p + m = 1; R5 is a C1-6 alkyl, C1-6 alkenyl, C1-6 polyalkenyl, C1-6 alkynyl, or C1-6 polyalkynyl group; or R5 is an OMEGA; R3, R4, R6 and R7, which may be the same or different, are independently H; or a C1-6 alkyl, C1-6 alkenyl, C1-6 polyalkenyl, C1-6 alkynyl or C1-6 polyalkynyl group; or halogen; or OR8, SR8, (NR8R9), where R8 and R9, which may be the same or different, are independently H; or alkyl groups having 1-6 carbons; or 1-2 substituted or unsubstituted alicyclic, heteroalicyclic, aromatic, or heteroarom. rings, containing 1-4 heteroatoms, wherein the heteroatoms are O, N, or S. R8 and R9 taken in combination are (CH2)2L(CH2)2 where L = O, NR10, CH2 or a single bond where R10 is H or an alkyl group having 1-6 carbons; or OSO2R19 where R19 is C1-6 alkyl, or C1-6 perfluoroalkyl, or aryl; or an OMEGA; or R6 and R7, taken in combination are (CH2)v where v = 3 or 4, or R6 and R7 form a fused aromatic ring that is optionally further substituted; such that at least one of R3, R4, R5, R6 and R7, or a substituent on the aromatic ring formed by R6 and R7, is an OMEGA; where OMEGA is a cyclic substituent that is attached by a single bond. Fluorescent Dye II selectively stains either viable or nonviable cells with a detectable fluorescent response that is different from the fluorescent response of Dye I. The stained cells are illuminated at a suitable absorption wavelength, and the fluorescent response is detected to distinguish viable and nonviable cells based on the fluorescent response.

IC ICM G01N033-00
ICS C12Q001-04; C12Q001-68; C07H001-00
INCL 436034000
CC 9-5 (Biochemical Methods)
Section cross-reference(s): 28, 41
ST cell viability detn fluorescent dye; stain fluorescent nucleic acid bacteria viability; animal cell viability detn fluorescent dye
IT Animal cell
Bacteria
Cell
Escherichia coli
Fibroblast
Lymphocyte
Staphylococcus aureus
(fluorescent cell viability assay using cyclic-substituted unsym. cyanine dyes)
IT Dyes, cyanine
Staining, biological
Stains, biological
(fluorescent, fluorescent cell viability assay using cyclic-substituted unsym. cyanine dyes)

IT Bacteria
(gram-neg., fluorescent cell viability assay using cyclic-substituted unsym. cyanine dyes)
IT Bacteria
(gram-pos., fluorescent cell viability assay using cyclic-substituted unsym. cyanine dyes)
IT 157199-63-8, To-pro-3
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(TO-PRO 3; fluorescent cell viability assay using cyclic-substituted unsym. cyanine dyes)
IT 166196-17-4, TO-TO 3
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(TO-TO 3; fluorescent cell viability assay using cyclic-substituted unsym. cyanine dyes)
IT 596-09-8, Fluorescein diacetate 1239-45-8, Ethidium bromide 3348-03-6 3546-21-2, Ethidium 24147-36-2, Thiazole orange 25535-16-4, Propidium iodide 36015-30-2, Propidium 61926-22-5, Ethidium homodimer 63783-82-4, Ethidium monoazide 104821-25-2 105284-17-1 124412-00-6 127770-45-0 139626-15-6, Tetramethylrhodamine ethyl ester 163831-68-3 169454-17-5 180388-99-2 180389-00-8 180389-01-9
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(fluorescent cell viability assay using cyclic-substituted unsym. cyanine dyes)
IT 157199-63-8, To-pro-3
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(TO-PRO 3; fluorescent cell viability assay using cyclic-substituted unsym. cyanine dyes)
RN 157199-63-8 HCAPLUS
CN Quinolinium, 4-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propen-1-yl]-1-[3-(trimethylammonio)propyl]-, iodide (1:2) (CA INDEX NAME)

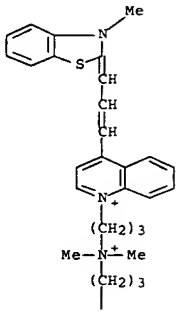


●2 I-

IT 166196-17-4, TO-TO 3
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(TO-TO 3; fluorescent cell viability assay using cyclic-substituted

unsym. cyanine dyes)
RN 166196-17-4 HCAPLUS
CN Quinolinium, 1,1'-[1,3-propanediylbis[(dimethyliminio)-3,1-propanediyl]]bis[4-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propen-1-yl]-, iodide (1:4) (CA INDEX NAME)

PAGE 1-A



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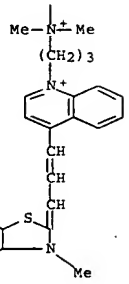
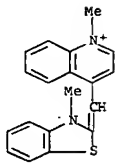


●4 I-

IT 24147-36-2, Thiazole orange
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(fluorescent cell viability assay using cyclic-substituted unsym. cyanine dyes)
RN 24147-36-2 HCAPLUS
CN Quinolinium, 1-methyl-4-[(3-methyl-2(3H)-benzothiazolylidene)methyl]-, iodide (1:1) (CA INDEX NAME)



● I⁻

L80 ANSWER 39 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1996:455535 HCAPLUS Full-text
DOCUMENT NUMBER: 125:216038
TITLE: Improved method of staining RNA in platelets for the evaluation of platelet production in thrombocytopenic patients
AUTHOR(S): Yamabe, Kozue; Satoh, Sachiko; Tsukada, Toshiyasu
CORPORATE SOURCE: Dep. Hematol. Lab., Toranomon Hosp., Tokyo, 105, Japan
SOURCE: Rinsho Byori (1996), 44(7), 681-686
CODEN: RBYOAI; ISSN: 0047-1860
PUBLISHER: Rinsho Byori Kankokai
DOCUMENT TYPE: Journal
LANGUAGE: Japanese

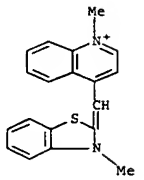
AB Measurement of RNA stained platelets was proven to be an easy and useful laboratory test to evaluate the state of platelet production in the bone marrow. As the normal value of platelet with thiazole orange (TO)- stained RNA in the original method was low, the values of TO- stained platelets in the cases with platelet hypoprodn. were within the normal range, but ideally, they should be below the normal range. We modified the original method by using Na citrate as the anticoagulant instead of EDTA, and by keeping the TO-stained preparation at 4° until the fluorescence was measured. The normal value of TO-stained platelets was elevated to 22.5 ± 3.3% (n = 40, M ± 1SD) or 54 ± 10 + 109/L. Twenty-seven out of 40 thrombocytopenic cases with ITP (idiopathic thrombocytopenic purpura) showed an elevated percentage of TO-stained platelets, 11 cases showed a normal and only 2 cases showed a percentage lower than normal. By contrast, 9 out of 12 cases with platelet hypoprodn. showed a lower percentage of TO-stained platelets and no cases showed a value higher than normal. The sensitivity and specificity of this modified RNA staining method for distinguishing thrombocytopenic cases with platelet hyperdestruction from that with hypoprodn. were 96% and 75%, resp.

CC 9-4 (Biochemical Methods)
Section cross-reference(s): 14
ST platelet RNA staining thiazole orange thrombocytopenia; sodium citrate platelet RNA staining thrombocytopenia
IT Blood platelet
Staining, biological
(use of Na citrate as anticoagulant before thiazole orange staining of platelet RNA as marker for platelet production in thrombocytopenic)
IT Ribonucleic acids

RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(use of Na citrate as anticoagulant before thiazole orange staining of platelet RNA as marker for platelet production in thrombocytopenic)
IT Blood platelet
(disease, thrombocytopenia, use of Na citrate as anticoagulant before thiazole orange staining of platelet RNA as marker for platelet production in thrombocytopenic)
IT 68-04-2, Sodium citrate
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(anticoagulant; use of Na citrate as anticoagulant before thiazole orange staining of platelet RNA as marker for platelet production in thrombocytopenic)
IT 107091-89-4, Thiazole orange
RL: ARG (Analytical reagent use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(use of Na citrate as anticoagulant before thiazole orange staining of platelet RNA as marker for platelet production in thrombocytopenic)
IT 107091-89-4, Thiazole orange
RL: ARG (Analytical reagent use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(use of Na citrate as anticoagulant before thiazole orange staining of platelet RNA as marker for platelet production in thrombocytopenic)
RN 107091-89-4 HCAPLUS
CN Quinolinium, 1-methyl-4-[(3-methyl-2(3H)-benzothiazolylidene)methyl]-, 4-methylbenzenesulfonate (1:1) (CA INDEX NAME)

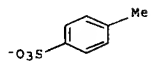
CM 1

CRN 24144-08-9
CMF C19 H17 N2 S



CM 2

CRN 16722-51-3
CMF C7 H7 O3 S



L80 ANSWER 40 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1996:443964 HCAPLUS Full-text
DOCUMENT NUMBER: 125:81256
TITLE: Substituted unsymmetrical cyanine dyes with selected permeability
INVENTOR(S): Yue, Stephen T.; Singer, Victoria L.; Roth, Bruce L.; Mozer, Thomas J.; Millard, Paul J.; Jones, Laurie J.; Jin, Xiaokui; Haugland, Richard P.; Poot, Martin
PATENT ASSIGNEE(S): Molecular Probes, Inc., USA
SOURCE: PCT Int. Appl., 85 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 8
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 9613552	A2	19960509	WO 1995-US13706		19951027
WO 9613552	A3	19960711			
W: AU, CA, JP					
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE					
US 5658751	A	19970819	US 1994-331031		19941027
CA 2179284	A1	19960509	CA 1995-2179284		19951027
CA 2179284	C	20060404			
AU 9539672	A	19960523	AU 1995-39672		19951027
AU 714890	B2	20000113			
EP 740689	A1	19961106	EP 1995-937613		19951027
EP 740689	B1	20020130			
R: AT, BE, CH, DE, FR, GB, LI, NL					
JP 09507879	T	19970812	JP 1996-514689		19951027
AT 212653	T	20020215	AT 1995-937613		19951027
PRIORITY APPLN. INFO.:			US 1994-331031	A	19941027
			US 1993-47683	B2	19930413
			US 1994-90890	A2	19940712
			WO 1995-US13706	W	19951027

OTHER SOURCE(S): MARPAT 125:81256

AB The invention describes the preparation and use of fluorescent stains for nucleic acids derived from unsym. cyanine dyes comprising a substituted benzazolium ring system linked by a methine bridge to a pyridinium or quinolinium ring system. The cyanine dyes of the invention possess a high sensitivity to oligonucleotides and larger nucleic acid polymers in a wide range of cells and gels, and are useful for the anal. of cell structure, membrane integrity or function, and determination of cell cycle distribution.

IC ICM C09B023-02
CC 9-4 (Biochemical Methods)
Section cross-reference(s): 3, 13, 14, 41
ST nucleic acid detection cyanine fluorescent stain; dye cyanine nucleic acid stain; animal cell organelle stain cyanine dye; cancer cell stain fluorescent cyanine dye
IT Salmonella typhimurium
(metabolic activity; substituted unsym. cyanine dyes with selected

permeability as fluorescent stains for nucleic acids)
IT Animal cell
Animal tissue
Animal tissue culture
Antibiotics
Bacteria
Bactericides, Disinfectants, and Antiseptics
Blood analysis
Body fluid
Cell
Cell cycle
Cell membrane
Cell nucleus
Cell proliferation
Chromosome
Cytoplasm
Dyes, cyanine
Eukaryote
Food analysis
Genetic polymorphism
Lymphocyte
Macrophage
Microorganism
Microorganism metabolism
Mitochondria
Monocyte
Neutrophil
Nucleoid
Parasite
Pharmaceutical analysis
Polymerase chain reaction
Saccharomyces cerevisiae
Viroid
Virus
Yeast
(substituted unsym. cyanine dyes with selected permeability as fluorescent stains for nucleic acids)
IT Deoxyribonucleic acids
Deoxyribonucleoproteins
Nucleic acids
Proteins, analysis
Ribonucleic acids
Ribonucleic acids, ribosomal
RL: ANT (Analyte); ANST (Analytical study)
(substituted unsym. cyanine dyes with selected permeability as fluorescent stains for nucleic acids)
IT Agglutinins and Lectins
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(substituted unsym. cyanine dyes with selected permeability as fluorescent stains for nucleic acids)
IT Antibodies
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(substituted unsym. cyanine dyes with selected permeability as fluorescent stains for nucleic acids)
IT Enzymes
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(substituted unsym. cyanine dyes with selected permeability as fluorescent stains for nucleic acids)
IT Pyridinium compounds
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)

(substituted unsym. cyanine dyes with selected permeability as fluorescent stains for nucleic acids)

IT Animal cell line
(3T3, substituted unsym. cyanine dyes with selected permeability as fluorescent stains for nucleic acids)

IT Animal cell line
(A431, substituted unsym. cyanine dyes with selected permeability as fluorescent stains for nucleic acids)

IT Enzymes
RL: ANT (Analyte); ANST (Analytical study)
(DNA-supercoiling, substituted unsym. cyanine dyes with selected permeability as fluorescent stains for nucleic acids)

IT Animal cell line
(MDCK, substituted unsym. cyanine dyes with selected permeability as fluorescent stains for nucleic acids)

IT Animal cell line
(P3X, substituted unsym. cyanine dyes with selected permeability as fluorescent stains for nucleic acids)

IT Meat
(beef, substituted unsym. cyanine dyes with selected permeability as fluorescent stains for nucleic acids)

IT Onium compounds
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(benzazolium, substituted unsym. cyanine dyes with selected permeability as fluorescent stains for nucleic acids)

IT Cytometry
(flow, substituted unsym. cyanine dyes with selected permeability as fluorescent stains for nucleic acids)

IT Dyes
Staining, biological
Stains, biological
(fluorescent, substituted unsym. cyanine dyes with selected permeability as fluorescent stains for nucleic acids)

IT Electrophoresis and Ionophoresis
(gel, substituted unsym. cyanine dyes with selected permeability as fluorescent stains for nucleic acids)

IT Nucleotides, analysis
RL: ANT (Analyte); ANST (Analytical study)
(oligo-, substituted unsym. cyanine dyes with selected permeability as fluorescent stains for nucleic acids)

IT Biological transport
(permeation, substituted unsym. cyanine dyes with selected permeability as fluorescent stains for nucleic acids)

IT Onium compounds
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(quinolinium, substituted unsym. cyanine dyes with selected permeability as fluorescent stains for nucleic acids)

IT Organelle
(vacuole, substituted unsym. cyanine dyes with selected permeability as fluorescent stains for nucleic acids)

IT 9001-99-4, RNase 9003-98-9, DNase 9075-08-5 24937-83-5, Poly rA 24939-09-1, Poly dA-poly dT 25086-81-1 25191-14-4 25191-20-2, Poly dA 25512-84-9, Poly dG-poly dC 25609-92-1, Poly dC 27416-86-0, Poly rU 27732-54-3, Poly dI 30811-80-4 37228-74-3, Exonuclease 80449-01-0, Topoisomerase
RL: ANT (Analyte); ANST (Analytical study)
(substituted unsym. cyanine dyes with selected permeability as fluorescent stains for nucleic acids)

IT 951-78-0D, Deoxyuridine, halogenated 23491-45-4, HOE33258
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)

(substituted unsym. cyanine dyes with selected permeability as fluorescent stains for nucleic acids)

IT 1239-45-8, Ethidium bromide 23491-52-3, HOE33342 24144-08-9 143413-84-7, TOTO-1 143413-86-9, Oxazole yellow 157199-59-2, TO-PRO-1 173080-70-1, SYTO 14
RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)
(substituted unsym. cyanine dyes with selected permeability as fluorescent stains for nucleic acids)

IT 161057-69-8
RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent); USES (Uses)
(substituted unsym. cyanine dyes with selected permeability as fluorescent stains for nucleic acids)

IT 2540-30-9P 161057-94-9P
RL: ARG (Analytical reagent use); RCT (Reactant); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(substituted unsym. cyanine dyes with selected permeability as fluorescent stains for nucleic acids)

IT 98251-89-9P 178918-68-8P 178918-69-9P 178918-70-2P 178918-71-3P 178918-72-4P 178918-73-5P 178918-74-6P 178918-75-7P 178918-76-8P 178918-77-9P 178918-78-0P 178918-79-1P 178918-80-4P 178918-81-5P 178918-82-6P 178918-83-7P 178918-84-8P 178918-85-9P 178918-86-0P 178918-87-1P 178918-88-2P 178918-89-3P 178918-90-6P 178918-91-7P 178918-92-8P 178918-93-9P 178918-94-0P 178918-95-1P 178918-96-2P 178918-97-3P 178918-98-4P 178918-99-5P 178919-00-1P 178919-01-2P 178919-02-3P 178919-04-5P 178919-05-6P 178919-06-7P 178919-07-8P 178919-08-9P 178919-09-0P 178919-10-3P 178919-11-4P 178919-12-5P 178919-13-6P 178919-14-7P 178919-15-8P 178919-16-9P 178919-17-0P 178919-18-1P 178919-19-2P 178919-20-5P 178919-21-6P 178919-22-7P 178919-23-8P 178919-24-9P 178919-31-8P 220222-55-9P
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(substituted unsym. cyanine dyes with selected permeability as fluorescent stains for nucleic acids)

IT 69-53-4, Ampicillin
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(substituted unsym. cyanine dyes with selected permeability as fluorescent stains for nucleic acids)

IT 74-88-4, Methyl iodide, reactions 108-02-1, 2-Dimethylaminoethanethiol 108-47-4, 2,4-Lutidine 607-66-9, 2-Hydroxy-4-methylquinoline 627-31-6, 1,3-Diiodopropane 696-62-8, 4-Iodoanisole 927-58-2, 4-Bromobutyryl chloride 1193-02-8, 4-Aminothiophenol 1198-37-4, 2,4-Dimethylquinoline 2349-67-9, 5-Amino-1,3,4-thiadiazole-2-thiol 2584-47-6 6760-40-3, 1,2-Dimethyl-4-quinolone 10025-87-3, Phosphorus oxychloride 19475-28-6 22049-05-4, 1,2-Dimethyl-4-methoxyquinolinium iodide 39759-82-5 55514-14-2, 3-Methyl-2-methylthiobenzothiazolium tosylate 57876-69-4, 2-Chloro-3-methylquinoline 61304-90-3 81287-35-6 127527-22-4, 4-(Dimethylamino)butyryl chloride 178919-25-0 178919-28-3 178919-32-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(substituted unsym. cyanine dyes with selected permeability as fluorescent stains for nucleic acids)

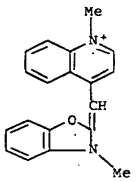
IT 18820-83-2P, Pyridinium iodide 178919-26-1P 178919-27-2P 178919-29-4P 178919-30-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(substituted unsym. cyanine dyes with selected permeability as

fluorescent stains for nucleic acids)

IT 143413-86-9, Oxazole yellow
RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)
(substituted unsym. cyanine dyes with selected permeability as fluorescent stains for nucleic acids)

RN 143413-86-9 HCAPLUS

CN Quinolinium, 1-methyl-4-[(3-methyl-2(3H)-benzoxazolylidene)methyl]-, iodide (1:1) (CA INDEX NAME)



L80 ANSWER 41 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1996:367649 HCAPLUS Full-text
DOCUMENT NUMBER: 125:81301
TITLE: Reagent and method for analyzing solid components in urine
INVENTOR(S): Inoue, Junya
PATENT ASSIGNEE(S): Toa Medical Electronics Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 30 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 708334	A2	19960424	EP 1995-610053	19951019
EP 708334	A3	19960918		
EP 708334	B1	20010523		
R: CH, DE, ES, FR, GB, IT, LI, NL				
JP 08170960	A	19960702	JP 1995-267454	19951016
JP 3580615	B2	20041027		
CA 2160962	A1	19960421	CA 1995-2160962	19951019
AU 9534366	A	19960502	AU 1995-34366	19951019
AU 701948	B2	19990211		
EP 1089078	A1	20010404	EP 2000-123791	19951019
EP 1089078	B1	20070228		
R: CH, DE, ES, FR, GB, IT, LI, NL				
ES 2156927	T3	20010801	ES 1995-610053	19951019
US 5891733	A	19990406	US 1995-545939	19951020

PRIORITY APPLN. INFO.: JP 1994-255580 A 19941020

EP 1995-610053 A3 19951019

OTHER SOURCE(S): MARPAT 125:81301

AB A reagent for analyzing solid components in urine comprising: (i) a buffer agent for maintaining pH at 5.0 to 9.0, (ii) an osmotic pressure compensating agent for maintaining osmotic pressure at 100 mOsm/kg to 600 mOsm/kg, (iii) a first dye which is a condensed benzene derivative, (i.v.) a second fluorescent dye capable of staining a damaged cell, and (v) a chelating agent. A diluent solution and a dyeing solution were prepared from pH 7.0 50 mM HEPES, sodium propionate (in an amount to adjust osmotic pressure at 150 mOsm/kg), and EDTA tri-K salt 0.4% and a dyeing solution consisting of 400 ppm 1st dye, and 1600 ppm second fluorescent dye.

IC ICM G01N033-50
ICS G01N033-569

ICA G01N015-14; C12Q001-04

CC 9-15 (Biochemical Methods)

ST urine analysis chelating osmotic dye

IT Chelating agents
Erythrocyte
Osmotic pressure
Urine analysis
(reagent composition containing dyes for analyzing solid components in urine)

IT Dyes
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(fluorescent, reagent composition containing dyes for analyzing solid components in urine)

IT 514-73-8, NK-136
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(NK 136; reagent composition containing dyes for analyzing solid components in urine)

IT 20591-23-5, NK-138
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(NK 138; reagent composition containing dyes for analyzing solid components in urine)

IT 15185-43-0, NK-1511
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(NK 1511; reagent composition containing dyes for analyzing solid components in urine)

IT 3071-69-0, NK 1590
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(NK 1590; reagent composition containing dyes for analyzing solid components in urine)

IT 20517-94-6, NK-1836
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(NK 1836; reagent composition containing dyes for analyzing solid components in urine)

IT 178742-72-8
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(NK 1954; reagent composition containing dyes for analyzing solid components in urine)

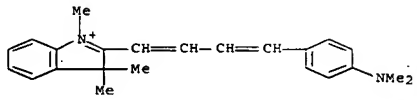
IT 89872-07-1
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(NK 2711; reagent composition containing dyes for analyzing solid

components in
urine)
IT 76433-27-7
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(NK 2780; reagent composition containing dyes for analyzing solid components in
urine)
IT 76433-29-9
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(NK 2783; reagent composition containing dyes for analyzing solid components in
urine)
IT 2642-25-3, NK-321
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(NK 321; reagent composition containing dyes for analyzing solid components in
urine)
IT 66230-26-0
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(NK 375; reagent composition containing dyes for analyzing solid components in
urine)
IT 3028-99-7
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(NK 376; reagent composition containing dyes for analyzing solid components in
urine)
IT 36536-22-8, NK-529
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(NK 529; reagent composition containing dyes for analyzing solid components in
urine)
IT 52181-10-9
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(NK 96; reagent composition containing dyes for analyzing solid components in
urine)
IT 62669-60-7, Oxazine 720
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(Oxazine 720; reagent composition containing dyes for analyzing solid components
in urine)
IT 85256-40-2
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(Oxazine 750 perchlorate; reagent composition containing dyes for analyzing solid components in urine)
IT 14969-56-3
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(Rhodanile blue; reagent composition containing dyes for analyzing solid components in urine)
IT 3521-06-0, Basic blue 1
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(basic blue 1; reagent composition containing dyes for analyzing solid components in urine)
IT 569-64-2, Basic green 4
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(basic green 4; reagent composition containing dyes for analyzing solid

components in urine)
IT 633-03-4
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(basic green; reagent composition containing dyes for analyzing solid components
in urine)
IT 60786-96-1
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(oxazine 4; reagent composition containing dyes for analyzing solid components
in urine)
IT 82-94-0 1934-16-3, Basic blue 24 2381-85-3, Nile Blue chloride
7199-02-2, Capri Blue GON 17572-97-3, Tripotassium EDTA 33231-00-4,
Iodine green 89106-91-2, Basic blue 124 177772-75-7, Capri Blue BB
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(reagent composition containing dyes for analyzing solid components in urine)
IT 76433-27-7
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(NK 2780; reagent composition containing dyes for analyzing solid components in
urine)
RN 76433-27-7 HCAPLUS
CN 3H-Indolium, 2-[4-[4-(dimethylamino)phenyl]-1,3-butadienyl]-1,3,3-trimethyl-, perchlorate (9CI) (CA INDEX NAME)

CM 1

CRN 76433-26-6
CMF C23 H27 N2



CM 2

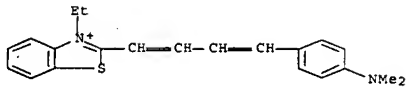
CRN 14797-73-0
CMF Cl O4

IT 76433-29-9
RL: ARG (Analytical reagent use); ANST (Analytical

study); USES (Uses)
(NK 2783; reagent composition containing dyes for analyzing solid components in
urine)
RN 76433-29-9 HCAPLUS
CN Benzothiazolium, 2-[4-[4-(dimethylamino)phenyl]-1,3-butadien-1-yl]-3-ethyl-, perchlorate (1:1) (CA INDEX NAME)

CM 1

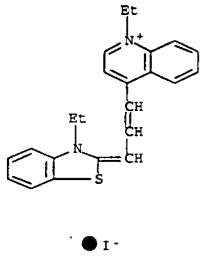
CRN 76433-28-8
CMF C21 H23 N2 S



CM 2

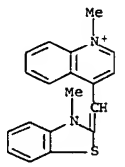
CRN 14797-73-0
CMF Cl O4

IT 2642-25-3, NK-321
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(NK 321; reagent composition containing dyes for analyzing solid components in
urine)
RN 2642-25-3 HCAPLUS
CN Quinolinium, 1-ethyl-4-[3-(3-ethyl-2(3H)-benzothiazolylidene)-1-propenyl]-, iodide (9CI) (CA INDEX NAME)



L80 ANSWER 42 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1996:83229 HCAPLUS Full-text
DOCUMENT NUMBER: 124:280288
TITLE: Comparison of self-sustained sequence-replication reaction systems
AUTHOR(S): Gebinoga, Michael; Oehlenschlaeger, Frank
CORPORATE SOURCE: Inst. for Molecular Biotechnology, Jena, Germany
SOURCE: European Journal of Biochemistry (1996), 235(1/2), 256-61
CODEN: EJBCAI; ISSN: 0014-2956
PUBLISHER: Springer
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The 3SR (self-sustained sequence-replication) reaction is a very efficient method for isothermal amplification of target DNA or RNA sequences in vitro. This method requires 3 enzymic activities: reverse transcriptase, DNA-dependent RNA polymerase and Escherichia coli RNase H. The original protocol was modified by using human immunodeficiency virus (HIV)-1 reverse transcriptase instead of avian myeloblastosis virus (AMV) reverse transcriptase to allow amplification with T7 RNA polymerase but without E. coli RNase H. Comparison of the incorporation kinetics between the conventional 3-enzyme 3SR and the 2-enzyme 3SR shows differences in the kinetic behavior. Furthermore, by the new 2-enzyme 3SR, the amplified RNA is obtained in a purer form compared with the expts. with 3-enzyme 3SR. 3SR should be adapted as a useful tool for Darwinian evolutionary expts.
CC 3-1 (Biochemical Genetics)
ST self sustained sequence replication reverse transcriptase; nucleic acid amplification fluorescence detection
IT Genetic methods
(3SR (self-sustained sequence-replication); 2 enzyme 3SR system using human immunodeficiency virus-1 reverse transcriptase and phage T7 RNA polymerase compared to 3 enzyme 3SR)
IT Virus, bacterial
(T7, RNA polymerase; 2 enzyme 3SR system using human immunodeficiency virus-1 reverse transcriptase and phage T7 RNA polymerase compared to 3 enzyme 3SR)
IT 143413-84-7
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(TOTO; as label for self-sustained sequence-replication reaction systems)

IT 24147-36-2, Thiazole orange
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(Thiazole orange; as label for self-sustained sequence-replication reaction systems)
IT 24147-36-2, Thiazole orange
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(Thiazole orange; as label for self-sustained sequence-replication reaction systems)
RN 24147-36-2 HCAPLUS
CN Quinolinium, 1-methyl-4-[(3-methyl-2(3H)-benzothiazolylidene)methyl]-, iodide (1:1) (CA INDEX NAME)



● I⁻

L80 ANSWER 43 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1995:623505 HCAPLUS Full-text
DOCUMENT NUMBER: 124:4485
TITLE: Fluorescence energy transfer and intramolecular energy transfer in particles using novel compounds
INVENTOR(S): Buechler, Kenneth Francis; Noar, Joseph Barry; Tadesse, Lema
PATENT ASSIGNEE(S): Biosite Diagnostics Inc., USA
SOURCE: PCT Int. Appl., 138 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 7
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9508772	A1	19950330	WO 1994-US10826	19940923
W: AU, CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6238931	B1	20010529	US 1994-274534	19940712
CA 2149419	A1	19950330	CA 1994-2149419	19940923
CA 2149419	C	20070515		
AU 9480112	A	19950410	AU 1994-80112	19940923
EP 670041	A1	19950906	EP 1994-931287	19940923
EP 670041	B1	20020130		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				

JP 08503994	T	19960430	JP 1995-509970	19940923
JP 3773949	B2	20060510		
AT 212721	T	20020215	AT 1994-931287	19950330
US 2002061602	A1	20020523	US 2001-776599	20010201
US 7083984	B2	20060801		

PRIORITY APPLN. INFO.:

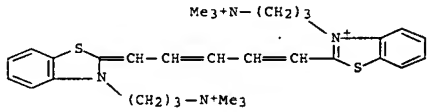
US 1993-126367	A	19930924
US 1993-138708	A	19931018
US 1994-274534	A	19940712
US 1994-311098	A2	19940923
WO 1994-US10826	W	19940923
US 1995-409298	A2	19950323
US 1995-409825	B2	19950323
US 1996-620597	A1	19960322
US 1998-66255	A2	19980424

AB Particles and methods are disclosed for the detection or visualization of analytes, including nucleic acids by using fluorescence energy transfer or intramol. energy transfer. Particles comprising an energy donor as a first component and a fluorescent dye as a second component positioned in said particles at an energy exchanging distance from one another, wherein the two components have a Stokes shift of ≥50 nm, said particle having bound on its surface, a protein, polypeptide, nucleic acid, nucleotide or protein containing ligand analog are disclosed and claimed. In addition, novel fluorescent dyes are described which exhibit intramol. energy transfer for use in labeling various mols., proteins, polypeptides, nucleotides and nucleic acids or incorporating into particles. Many novel phthalocyanine derivs. and hybrid phthalocyanine derivs. are disclosed and claimed. Such derivs. also may contain an electron transfer subunit. Axial ligands may be covalently bound to the metals contained in the hybrid phthalocyanine derivs. Numerous compds. capable of intramol. energy transfer as well as compds. for fluorescence energy transfer are claimed.
IC ICM G01N033-546
ICS C09B047-04
CC 9-5 (Biochemical Methods)
Section cross-reference(s): 15, 41, 74, 80
IT Blood analysis
Colloids
Fluorescence quenching
Fluorescent substances
Fluorometers
Immunoassay
Latex
Liposome
Urine analysis
(fluorescence and intramol. energy transfer in particles for biochem. anal.)
IT 514-73-8 519-62-0, Chlorophyll b 2321-07-5 3071-70-3 14806-50-9
16595-48-5 17094-16-5 23481-50-7 24796-94-9, Oxazine 1 perchlorate
30753-88-9 53213-94-8 53655-17-7 56089-72-6 70365-30-9
83484-76-8 86880-07-1 94052-41-2 97148-81-7 97807-64-2
116453-73-7 122711-10-8 150749-57-8 163968-80-7
163968-81-8 163968-82-9 163968-84-1 163968-85-2 163968-86-3
163968-87-4 163968-88-5 163968-89-6 163968-90-9 163968-91-0
163968-92-1 163968-93-2 163968-95-4 163969-13-9 163969-14-0
164106-16-5 171118-91-5 171118-92-6D, reaction with silicon phthalocyanine 171118-93-7 171118-99-3
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(fluorescence and intramol. energy transfer in particles for biochem. anal.)
IT 150749-57-8

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(fluorescence and intramol. energy transfer in particles for biochem. anal.)

RN 150749-57-8 HCAPLUS

CN Benzothiazolium, 3-[3-(trimethylammonio)propyl]-2-[5-[3-[3-(trimethylammonio)propyl]-2(3H)-benzothiazolylidene]-1,3-pentadienyl]-, tribromide (9CI) (CA INDEX NAME)



●3 Br⁻

L80 ANSWER 44 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1991:510002 HCAPLUS Full-text

DOCUMENT NUMBER: 115:110002

TITLE: Nucleic acid fractionation by countermigration capillary electrophoresis

INVENTOR(S): Chin, Allan Michael

PATENT ASSIGNEE(S): Applied Biosystems, Inc., USA

SOURCE: PCT Int. Appl., 52 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9102244	A1	19910221	WO 1990-US4380	19900806
W: JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE				
US 5096554	A	19920317	US 1989-390631	19890807
US 5110424	A	19920505	US 1990-562790	19900806
EP 486559	A1	19920527	EP 1990-912127	19900806
EP 486559	B1	19960320		
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE				
JP 04507001	T	19921203	JP 1990-511646	19900806
JP 07097101	B	19951018		
AT 135606	T	19960415	AT 1990-912127	19900806
PRIORITY APPLN. INFO.:			US 1989-390631 A	19890807
			WO 1990-US4380 W	19900806

AB The title method is based on countermigration of nucleic acid fragments in an upstream direction through a polymer-containing (e.g. cellulose derivative-containing) solution which is moving by electroosmotic flow in a downstream direction. Fractionation of selected-size nucleic acid fragments can be enhanced by reducing the difference between the electroosmotic flow rate and the migration rates of the selected-size fragments. An intercalating agent

may be added to double-stranded fragments to increase preferentially the migration roles of smaller mol. weight fragments through the polymer solution Schematic diagrams of the electrophoretic system are included, as are electropherograms of fractionated DNA fragments, e.g. a mixture formed by HaeIII digestion of .vphi.X174 phage.

IC ICM G01N027-26
ICS B01D057-02

CC 9-7 (Biochemical Methods)

IT Virus, bacterial
(phi X174, DNA fragments of, countermigration capillary electrophoresis fractionation of)

IT 65-61-2, Acridine orange 1239-45-8 107091-89-4, Thiazole orange
RL: ANST (Analytical study)
(in countermigration capillary electrophoresis of nucleic acid fragments)

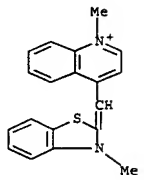
IT 107091-89-4, Thiazole orange
RL: ANST (Analytical study)
(in countermigration capillary electrophoresis of nucleic acid fragments)

RN 107091-89-4 HCAPLUS

CN Quinolinium, 1-methyl-4-[(3-methyl-2(3H)-benzothiazolylidene)methyl]-, 4-methylbenzenesulfonate (1:1) (CA INDEX NAME)

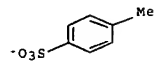
CM 1

CRN 24144-08-9
CMF C19 H17 N2 S



CM 2

CRN 16722-51-3
CMF C7 H7 O3 S



L80 ANSWER 45 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1990:232277 HCAPLUS Full-text
DOCUMENT NUMBER: 112:232277
TITLE: Fluorescent nucleic acid dye method for multi-parameter flow-cytometric analysis of cellular components of a body fluid
INVENTOR(S): Loken, Michael R.; Terstappen, Leon W. M. M.
PATENT ASSIGNEE(S): Becton, Dickinson and Co., USA
SOURCE: Eur. Pat. Appl., 12 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 347210	A2	19891220	EP 1989-306036	19890614
EP 347210	A3	19901017		
EP 347210	B1	19940907		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
US 5047321	A	19910910	US 1988-207099	19880615
AU 8935961	A	19891221	AU 1989-35961	19890601
AU 613197	B2	19910725		
CA 1340170	C	19981208	CA 1989-601444	19890601
NO 8902302	A	19891218	NO 1989-2302	19890605
NO 175506	B	19940711		
NO 175506	C	19941019		
FI 8902926	A	19891216	FI 1989-2926	19890614
FI 94180	B	19950413		
FI 94180	C	19950725		
ES 2063820	T3	19950116	ES 1989-306036	19890614
DK 8902968	A	19891216	DK 1989-2968	19890615
JP 02073157	A	19900313	JP 1989-153564	19890615
JP 07026954	B	19950329		

PRIORITY APPLN. INFO.: US 1988-207099 A 19880615

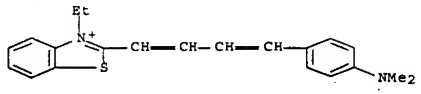
AB The title method uses (1) >1 fluorescence measurements with ≥2 nucleic acid dyes and ≥1 fluorescently labeled cell-surface marker, and (2) >1 light scattering measurements. A kit containing the nucleic acid dyes and cell-surface marker is also described. The method of the invention was used in differential blood cell anal. of a thrombocytopenic B-chronic lymphocytic leukemia patient. A blood sample from the patient was incubated with LDS-751 and Thiazole-Orange (nucleic acid dyes) and HLe-1 (anti-CD45 antigen monoclonal antibody) conjugated to phycoerythrin. Frequency of cells occurring in the light-scattering region typical for platelets was low compared with normal peripheral blood, but discrimination of platelets from reticulocytes was still excellent. Separation of leukocytes and reticulocytes was less clear, but these 2 cell types could be clearly separated on the basis of expression of CD45 antigen. Dot plots for the flow-cytometric differential anal. are given. Differential anal. of normal bone marrow cells is also described.

IC ICM G01N033-58
ICS G01N033-50
CC 9-5 (Biochemical Methods)
IT Blood analysis
Cerebrospinal fluid
Peritoneal fluid
Urine analysis
(flow cytometry in, nucleic acid dyes and fluorescence-labeled cell-surface marker for)
IT 76433-29-9, LDS 751 107091-89-4, Thiazole-Orange

RL: ANST (Analytical study)
(for differential nucleic acid dye, in flow cytometry of body fluid with fluorescence-labeled cell-surface marker)
IT 76433-29-9, LDS 751 107091-89-4, Thiazole-Orange
RL: ANST (Analytical study)
(for differential nucleic acid dye, in flow cytometry of body fluid with fluorescence-labeled cell-surface marker)
RN 76433-29-9 HCAPLUS
CN Benzothiazolium, 2-[4-[4-(dimethylamino)phenyl]-1,3-butadien-1-yl]-3-ethyl-, perchlorate (1:1) (CA INDEX NAME)

CM 1

CRN 76433-28-8
CMF C21 H23 N2 S



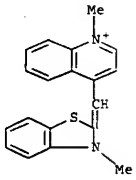
CM 2

CRN 14797-73-0
CMF Cl O4

RN 107091-89-4 HCAPLUS
CN Quinolinium, 1-methyl-4-[(3-methyl-2(3H)-benzothiazolylidene)methyl]-, 4-methylbenzenesulfonate (1:1) (CA INDEX NAME)

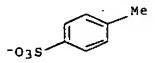
CM 1

CRN 24144-08-9
CMF C19 H17 N2 S



CM 2

CRN 16722-51-3
CMF C7 H7 O3 S



L80 ANSWER 46 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1990:232276 HCAPLUS Full-text
DOCUMENT NUMBER: 112:232276
TITLE: Flow-cytometric method using a nucleic acid dye and optical immunoflurorescence for discriminating between intact and damaged cells in a body fluid
INVENTOR(S): Terstappen, Leon W. M. M.; Loken, R. Michael; Shah, Virendra O.
PATENT ASSIGNEE(S): Becton, Dickinson and Co., USA
SOURCE: Eur. Pat. Appl., 14 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

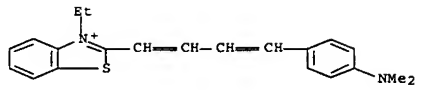
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 347039	A2	19891220	EP 1989-304754	19890510
EP 347039	A3	19901024		
EP 347039	B1	19931118		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
US 5057413	A	19911015	US 1988-206454	19880613
AT 97500	T	19931215	AT 1989-304754	19890510
ES 2061987	T3	19941216	ES 1989-304754	19890510
JP 02103464	A	19900416	JP 1989-150348	19890613
PRIORITY APPLN. INFO.:			US 1988-206454 A	19880613
			EP 1989-304754 A	19890510

AB The title method uses the nucleic acid dye to selectively stain intact vs. damaged cells, which then may be counted and sorted by flow cytometry. The method may also be used in conjunction with fluorescently labeled monoclonal antibodies (MAbs) to simultaneously identify cellular antigens. A kit containing the nucleic acid dye and ≥1 MAbs is described. The method was used to determine the percent of intact nucleated cells in NH4Cl-lysed, paraformaldehyde-fixed peripheral blood leukocytes from 20 donors, using LDS-751 as the nucleic acid dye. The mean nos. of intact nucleated cells, intact lymphocytes, intact monocytes, intact neutrophils, and intact eosinophils were 34, 88, 56, 76, and 41%, resp. Use of MAbs to a variety of fluorescently-labeled antigens, e.g. phycoerythrin-labeled CD5 and FITC-labeled CD20, in the above method is described.

IC ICM G01N033-58
ICS C12Q001-02; G01N021-75
ICA G01N033-569; G01N033-577
CC 9-5 (Biochemical Methods)
IT Blood analysis
Cerebrospinal fluid
Peritoneal fluid
Urine analysis
(flow cytometry in, intact and damaged cell determination by, nucleic acid dye
for)
IT 76433-29-9, LDS 751
RL: ANST (Analytical study)
(as nucleic acid dye, in flow cytometry of intact and damaged cells)
IT 76433-29-9, LDS 751
RL: ANST (Analytical study)
(as nucleic acid dye, in flow cytometry of intact and damaged cells)
RN 76433-29-9 HCAPLUS
CN Benzothiazolium, 2-[4-[4-(dimethylamino)phenyl]-1,3-butadien-1-yl]-3-ethyl-, perchlorate (1:1) (CA INDEX NAME)

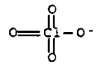
CM 1

CRN 76433-28-8
CMF C21 H23 N2 S



CM 2

CRN 14797-73-0
CMF Cl O4



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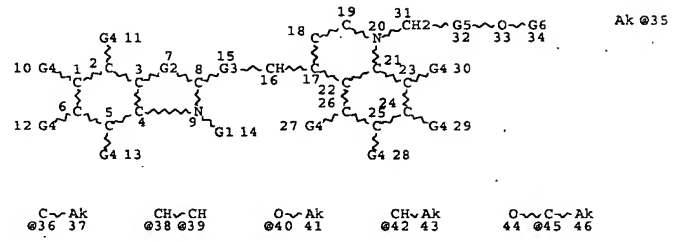


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VAR G5=CH2/42
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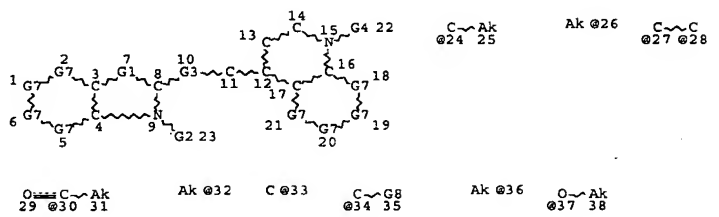


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NUMBER OF NODES IS  38

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=> d l81 ibib abs tot

L81  ANSWER 1 OF 5  HCAPLUS  COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:         2005:325608  HCAPLUS  Full-text
DOCUMENT NUMBER:          142:351689
TITLE:                    Apparatus and method for analyzing bacteria
INVENTOR(S):              Kawashima, Yasuyuki
PATENT ASSIGNEE(S):       Sysmex Corporation, Japan
SOURCE:                   U.S. Pat. Appl. Publ., 22 pp.
                          CODEN: USXXCO
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.          DATE
     ---------------      ----   --------    -------------------      --------
     US 2005079569         A1    20050414    US 2004-961734           20041008
     JP 2005110629         A     20050428    JP 2003-352170           20031010
PRIORITY APPLN. INFO.:                       JP 2003-352170      A    20031010
AB   An apparatus for analyzing bacteria is described that includes an analytic
     sample preparation section for preparing an analytic sample by treating a
     specimen so as to generate a morphol. difference between Gram-neg. bacteria
     and Gram-pos. bacteria, a detector for detecting optical information from each
     particle contained in the analytic sample and an analyzing section for
     detecting Gram-pos. bacteria contained on the basis of the detected optical
     information.  A method for analyzing bacteria is also described.


L81  ANSWER 2 OF 5  HCAPLUS  COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:         2004:834918  HCAPLUS  Full-text
TITLE:                    Methods for measuring bacteria,
                          bacteria measuring apparatuses, and storage
                          media for storing computer-executable programs for
                          analyzing bacteria
INVENTOR(S):              Kawashima, Yasuyuki
PATENT ASSIGNEE(S):       Sysmex Corporation, Japan
SOURCE:                   Eur. Pat. Appl.
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                          CODEN: EPXXDW
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.          DATE
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     EP 1466985            A2    20041013    EP 2004-8637             20040408
     EP 1466985            A3    20041103
     EP 1466985            B1    20060621
        R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR
     JP 2004305173         A     20041104    JP 2003-106569           20030410
     US 2004219627         A1    20041104    US 2004-821732           20040408
PRIORITY APPLN. INFO.:                       JP 2003-106569      A    20030410
AB   Methods for measuring bacteria are described that include (a) fluorescently
     staining bacteria in a sample; (b) detecting size information from the
     bacteria in the sample, and fluorescence information expressing intensity of
     fluorescent light emitted by the bacteria; (c) creating a scattergram
     representing a distribution of the bacteria based on the size information and
     the fluorescence information detected; (d) analyzing the distribution of the
     bacteria in the scattergram; and (e) determining whether the bacteria in the
     sample is bacillus or coccus based on a result of the analyzing.  Bacteria
     measuring apparatuses and storage media for storing computer-executable
     programs for analyzing bacteria are also described.


L81  ANSWER 3 OF 5  HCAPLUS  COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:         2004:348049  HCAPLUS  Full-text
DOCUMENT NUMBER:          140:317640
TITLE:                    Sample analyzers, bacteria analyzers, and
                          solutions for diluting and cleaning
INVENTOR(S):              Kawashima, Yasuyuki; Ikeda, Masayuki
PATENT ASSIGNEE(S):       Sysmex Corporation, Japan
SOURCE:                   Eur. Pat. Appl., 40 pp.
                          CODEN: EPXXDW
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.          DATE
     ---------------      ----   --------    -------------------      --------
     EP 1413889            A2    20040428    EP 2003-24425            20031023
     EP 1413889            A3    20040602
     EP 1413889            B1    20061220
        R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
     JP 2004144633         A     20040520    JP 2002-310585           20021025
     JP 3863087            B2    20061227
     AT 349014             T     20070115    AT 2003-24425            20031023
     US 2004096931         A1    20040520    US 2003-692554           20031024
PRIORITY APPLN. INFO.:                       JP 2002-310585      A    20021025
AB   Sample analyzers for analyzing a sample are described that include a pipet for
     suctioning the sample; a sample preparation unit for preparing a measured
     sample by diluting the sample supplied by the pipet with an acidic solution; a
     pipet washing unit for washing the pipet with the acidic solution; a detection
     unit for obtaining a detection signal from the measured sample prepared by the
     sample preparation unit; and a controller for calculating an anal. result from
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the detection signal obtained by the detection unit. Bacteria analyzers for analyzing bacteria and solns. for use in sample analyzers are also described.

L81 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:282738 HCAPLUS Full-text
TITLE: Bacteria counting method, bacteria counting apparatus, and reagent kit for counting bacteria
INVENTOR(S): Kawashima, Yasuyuki; Ikeuchi, Yoshiro; Sakai, Yasuhiro
PATENT ASSIGNEE(S): Sysmex Corporation, Japan
SOURCE: Eur. Pat. Appl.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1405918	A1	20040407	EP 2003-22247	20031001
EP 1405918	B1	20070228		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2004121143	A	20040422	JP 2002-292606	20021004
AT 355387	T	20060315	AT 2003-22247	20031001
US 2004067548	A1	20040408	US 2003-679146	20031003
PRIORITY APPLN. INFO.:			JP 2002-292606 A	20021004

AB Methods for counting bacteria are described that include: (a) preparing an assay sample by staining a specimen using a fluorescent dye, thereby producing a difference in fluorescent intensity between live bacteria and dead bacteria; (b) detecting optical information from the assay sample; and (c) classifying and counting the live bacteria and the dead bacteria based on the detected optical information. Bacteria counting apparatuses and reagent kits for counting bacteria are also described.

L81 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:100146 HCAPLUS Full-text
DOCUMENT NUMBER: 134:271173
TITLE: Formulation design of ointment base suitable for healing of lesions in treatment of bedsores
AUTHOR(S): Shigeyama, Masato; Ohgaya, Toyoaki; Takeuchi, Hirofumi; Hino, Tomoaki; Kawashima, Yoshiaki
CORPORATE SOURCE: Department of Pharmacy, Takayama Red Cross Hospital, Gifu, 506-8550, Japan
SOURCE: Chemical & Pharmaceutical Bulletin (2001), 49(2), 129-133
CODEN: CPBTAL; ISSN: 0009-2363
PUBLISHER: Pharmaceutical Society of Japan
DOCUMENT TYPE: Journal
LANGUAGE: English
AB We intended to develop a desired ointment base suitable for treatment of bedsores including the proliferation of granulation and epidermis. The main bedsore bacteria detected in our hospital were S. aureus in gram-pos. coccus and P. aeruginosa in gram-neg. bacillus. As the macrogol ointment (MO) was found to have bactericidal effects on these bacteria, MO was adopted as the base for the objective ointment. To improve the properties of the ointment base such as regulating the humidity of the exudation and controlling the

release of antibiotics formulated in the ointment, co-formulating effects of various additives to MO were evaluated. The sustained release function of the ointment base was obtained by adding hydrophilic petrolatum (HP) to MO. However, the resultant ointment was found to have a poor humidity regulating property. On the other hand, MO containing 5% of hydroxypropyl cellulose (HPC) showed both the humidity regulating and the controlled drug releasing properties. It was considered that HPC particles dispersed in the ointment could be swelled by absorbing water to form a gel network. The curd tension meter tests for the ointments prepared with the various polymers showed that the MO-HPC base, which showed the highest sustained drug releasing property, was found to have the highest hardness. This result means that HPC formulated into the base forms the most rigid gel structure to resist the erosion of the ointment and to control the drug release.
REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d his nofil

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FILE 'REGISTRY' ENTERED AT 14:19:55 ON 23 AUG 2007
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L3 368 SEA ABB=ON PLU=ON L1 AND NC=2
L4 44 SEA ABB=ON PLU=ON L3 AND CL=1 AND O=4
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L5 3 SEA ABB=ON PLU=ON C23H28N2.CLHO4/MF
D SCA
E C23H28N2/MF
L6 6 SEA ABB=ON PLU=ON C23H28N2/MF AND L1
D SCA
E BENZENAMINE, 4-(4-(2,3-DIHYDRO-1,3,3-TRIMETHYL-1H-INDOL-2-YL)
L7 1 SEA ABB=ON PLU=ON "BENZENAMINE, 4-(4-(2,3-DIHYDRO-1,3,3-TRIMETHYL-1H-INDOL-2-YL)-1,3-BUTADIENYL)-N,N-DIMETHYL-"/CN
D
L8 0 SEA ABB=ON PLU=ON 54268-89-2/CRN

FILE 'REGISTRY' ENTERED AT 14:28:55 ON 23 AUG 2007
L9 STR 54268-89-2
L10 1 SEA FAM FUL L9
D SCAN
E C23H27N2.CL04/MF
E C23H27N2/MF
L11 47 SEA ABB=ON PLU=ON C23H27N2/MF
L12 1 SEA ABB=ON PLU=ON L11 AND L1
D SCA
D

FILE 'REGISTRY' ENTERED AT 14:31:26 ON 23 AUG 2007
L13 STR 76433-26-6
L14 7 SEA FAM FUL L13
D SCA
E C23H27N2.CL04/MF
E C23H27N2.CLO4
E C23H27N2.CLO4/MF
L15 12 SEA ABB=ON PLU=ON C23H27N2.CLO4/MF
L16 1 SEA ABB=ON PLU=ON L15 AND L1
D SCA

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     FILE 'CAPLUS' ENTERED AT 14:33:31 ON 23 AUG 2007
L17          29 SEA ABB=ON  PLU=ON  L16

     FILE 'STNGUIDE' ENTERED AT 14:33:50 ON 23 AUG 2007

     FILE 'REGISTRY' ENTERED AT 14:43:49 ON 23 AUG 2007
               E C21H23N2S.CLO4/MF
L18          13 SEA ABB=ON  PLU=ON  C21H23N2S.CLO4/MF
L19           1 SEA ABB=ON  PLU=ON  L18 AND NRS=2 AND NR=3 AND NCSC2-C6/ES AND
                C6/ES
                D SCA
                E C21H23N2S.CLO4/MF
L*** DEL      13 S E3
                E C31H43N4S2.3BR/MF
L20           1 SEA ABB=ON  PLU=ON  C31H43N4S2.3BR/MF
                D SCA
                E C53H62N4S2.3BR/MF
                E C53H62N6S2.3BR/MF
                E C53H62N6S2.4I/MF
L21           2 SEA ABB=ON  PLU=ON  C53H62N6S2.4I/MF
L22           2 SEA ABB=ON  PLU=ON  L21 AND NRS=4 AND NR=8
                D SCA
                E "QUINOLINIUM, 1,1'-(1,3-PROPANEDIYLBIS"/CN
                E "QUINOLINIUM, 1,1'-(1,3-PROPANEDIYLBIS((DIMETHYLIMINIO)-3,1-P
                E "QUINOLINIUM, 1,1'-(1,3-PROPANEDIYLBIS((DIMETHYLIMINIO)-3,1-P
L23           1 SEA ABB=ON  PLU=ON  "QUINOLINIUM, 1,1'-(1,3-PROPANEDIYLBIS((DIM
                ETHYLIMINIO)-3,1-PROPANEDIYL))BIS(4-(3-(3-METHYL-2(3H)-BENZOXAZ
                OLYLIDENE)-1-PROPENYL)-, TETRAIODIDE"/CN
L24           0 SEA ABB=ON  PLU=ON  L23 AND L21
                D L21
L25           1 SEA ABB=ON  PLU=ON  L21 NOT 177597-81-8
                D SCA
                E C26H31N3S.2I/MF
L26           1 SEA ABB=ON  PLU=ON  C26H31N3S.2I/MF
                D SCA

     FILE 'STNGUIDE' ENTERED AT 14:54:34 ON 23 AUG 2007

     FILE 'REGISTRY' ENTERED AT 15:01:53 ON 23 AUG 2007
               E C27H30N4O6S2.2C6H16N/MF
L27          49 SEA ABB=ON  PLU=ON  C27H30N4O6S2/MF
L28           0 SEA ABB=ON  PLU=ON  L27 AND NCNC3/ES AND N2C3/ES AND C6/ES
L29        4535 SEA ABB=ON  PLU=ON  NCNC3/ES AND N2C3/ES AND C6/ES AND NR=3
L30          17 SEA ABB=ON  PLU=ON  L29 AND S=2 AND O=6 AND N=4
L31          14 SEA ABB=ON  PLU=ON  L30 AND NC=1
                D SCA
                E C27H32N4O6S2.C6H15N/MF
L32           2 SEA ABB=ON  PLU=ON  C27H32N4O6S2.2C6H15N/MF
                D SCA
                E C35H27BF6N3O7S2.NA/MF
L33           1 SEA ABB=ON  PLU=ON  C35H27BF6N3O7S2.NA/MF
                D SCA
                E C35H28BF6N4O7S.NA/MF
L34           1 SEA ABB=ON  PLU=ON  C35H28BF6N4O7S.NA/MF
                D SCA
L35             STR
L36           0 SEA SSS SAM L35
L37           0 SEA SSS FUL L35
L38             STR L35
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L39           2 SEA SSS SAM L38
                D SCA
L40          20 SEA SSS FUL L38
L41          10 SEA ABB=ON  PLU=ON  L40 AND NC=2
L42             STR
L43           1 SEA SSS SAM L42
                D SCA
L44          95 SEA SSS FUL L42
L45          48 SEA ABB=ON  PLU=ON  L44 AND NC=2
L46          67 SEA ABB=ON  PLU=ON  L16 OR L19 OR L20 OR L25 OR L26 OR L32 OR
                L33 OR L34 OR L41 OR L45

     FILE 'CAPLUS' ENTERED AT 16:33:40 ON 23 AUG 2007
L47         526 SEA ABB=ON  PLU=ON  L46
                E US2004-803667/APPS
L48           1 SEA ABB=ON  PLU=ON  US2004-803667/AP
                SEL RN

     FILE 'REGISTRY' ENTERED AT 16:34:32 ON 23 AUG 2007
L49          57 SEA ABB=ON  PLU=ON  (7803-49-8/BI OR 10182-91-9/BI OR 10182-92-
                0/BI OR 107-35-7/BI OR 107-95-9/BI OR 107-96-0/BI OR 108-98-5/B
                I OR 110-15-6/BI OR 110-17-8/BI OR 1119-97-7/BI OR 121-57-3/BI
                OR 1310-73-2/BI OR 1333-74-0/BI OR 13881-91-9/BI OR 14797-65-0/
                BI OR 15053-09-5/BI OR 150749-57-8/BI OR 15461-40-2/BI OR
                157199-63-8/BI OR 166196-17-4/BI OR 189148-50-3/BI OR 24147-36-
                2/BI OR 335080-22-3/BI OR 33669-61-3/BI OR 361544-71-0/BI OR
                361544-72-1/BI OR 50-21-5/BI OR 50-81-7/BI OR 52-90-4/BI OR
                5329-14-6/BI OR 56-40-6/BI OR 56-84-8/BI OR 56-85-9/BI OR
                56-86-0/BI OR 57-13-6/BI OR 60-24-2/BI OR 60-32-2/BI OR
                63-68-3/BI OR 63-74-1/BI OR 6303-21-5/BI OR 68-11-1/BI OR
                6899-10-1/BI OR 70-18-8/BI OR 70-47-3/BI OR 74-89-5/BI OR
                7440-44-0/BI OR 7558-79-4/BI OR 76433-27-7/BI OR 76433-29-9/BI
                OR 7647-01-0/BI OR 77-92-9/BI OR 7704-34-9/BI OR 7778-77-0/BI
                OR 7782-44-7/BI OR 7782-99-2/BI OR 877-24-7/BI OR 89-65-6/BI)
L50          10 SEA ABB=ON  PLU=ON  L49 AND L46

     FILE 'CAPLUS' ENTERED AT 16:35:00 ON 23 AUG 2007
               D SCA L48
               E CYTOMETRY+ALL/CT

     FILE 'HCAPLUS' ENTERED AT 16:36:16 ON 23 AUG 2007
L51        8194 SEA ABB=ON  PLU=ON  CYTOMETRY+PFT,NT/CT

     FILE 'CAPLUS' ENTERED AT 16:36:27 ON 23 AUG 2007
               D SCA L48

     FILE 'HCAPLUS' ENTERED AT 16:36:28 ON 23 AUG 2007
               E URINE ANALYSIS+ALL/CT
L52       46411 SEA ABB=ON  PLU=ON  URINE ANALYSIS+PFT,NT/CT
L53         145 SEA ABB=ON  PLU=ON  L47 AND(L51 OR L52 OR URIN? OR ?STAIN? OR
                BLOOD?)
L54       14072 SEA ABB=ON  PLU=ON  STAINING, BIOLOGICAL+PFT/CT
L55        1842 SEA ABB=ON  PLU=ON  STAINS, BIOLOGICAL+PFT/CT
L56          58 SEA ABB=ON  PLU=ON  L47 AND (L54 OR L55)
L*** DEL      0 S L46(L)ANST+NT/CT
L57         192 SEA ABB=ON  PLU=ON  L46(L)ANST+NT/RL
L58         122 SEA ABB=ON  PLU=ON  L46(L)BIOL+NT/RL
L59          50 SEA ABB=ON  PLU=ON  L57 AND L58
L60          11 SEA ABB=ON  PLU=ON  L56 AND L59
L61          11 SEA ABB=ON  PLU=ON  L47 AND L52
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L62          11 SEA ABB=ON  PLU=ON  L47 AND URIN?
L63          22 SEA ABB=ON  PLU=ON  L61 OR L62 OR L60
L64          11 SEA ABB=ON  PLU=ON  L61 OR L62
L65           6 SEA ABB=ON  PLU=ON  L64 AND L57
L66           5 SEA ABB=ON  PLU=ON  L64 AND L58
L67          22 SEA ABB=ON  PLU=ON  L65 OR L66 OR L60

     FILE 'CAPLUS' ENTERED AT 16:43:08 ON 23 AUG 2007
               D SCA L48

     FILE 'HCAPLUS' ENTERED AT 16:43:08 ON 23 AUG 2007
L68          29 SEA ABB=ON  PLU=ON  (L57 OR L58) AND ?BACTER?
L69          46 SEA ABB=ON  PLU=ON  L67 OR L68
L70           1 SEA ABB=ON  PLU=ON  L69 AND L48
               D SCA
L*** DEL     17 S L59 AND ?STAIN?
L71          29 SEA ABB=ON  PLU=ON  L69 AND ?STAIN?
L72           1 SEA ABB=ON  PLU=ON  L71 AND L48
               D SCA
L73          46 SEA ABB=ON  PLU=ON  L69 OR L71
L74        4829 SEA ABB=ON  PLU=ON  SAKAI Y?/AU
L75        2302 SEA ABB=ON  PLU=ON  KAWASHIMA Y?/AU
L76         989 SEA ABB=ON  PLU=ON  INOUE J?/AU
L77         293 SEA ABB=ON  PLU=ON  IKEUCHI Y?/AU
L78           7 SEA ABB=ON  PLU=ON  (L74 OR L75 OR L76 OR L77) AND ?BACTER?
               AND ?STAIN?

     FILE 'CAPLUS' ENTERED AT 16:46:42 ON 23 AUG 2007

     FILE 'HCAPLUS' ENTERED AT 16:46:51 ON 23 AUG 2007
L79           2 SEA ABB=ON  PLU=ON  L73 AND L78
L80          46 SEA ABB=ON  PLU=ON  L73 OR L79
L81           5 SEA ABB=ON  PLU=ON  L78 NOT L79

     FILE 'HCAPLUS' ENTERED AT 16:47:30 ON 23 AUG 2007
               D QUE L80
               D L80 IBIB ABS HITIND HITSTR TOT
               D QUE L81
               D L81 IBIB ABS TOT
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